Pacific Rim Regional Collegiate Cyber Defense Competition

March 22nd – 24th

2024

Team Packet

Contents

To the Participants of the Pacific Rim Regional Collegiate Cyber Defense Competition:

As the Regional Director of the Pacific Rim Regional Collegiate Cyber Defense Competition (PRCCDC), I would like to welcome you to the 16th Annual Cyber Defense Competition. This year we have 11 teams who qualified to compete

Columbia Basin College	**South Puget Sound Community College**
Central Washington University	**The Evergreen State College**
George Fox University	**UW Bothell**
Highline College	**Western Washington University**
Idaho State University	**Whatcom Community College**
Oregon State University	

We expect this to be a profound learning experience for students and an opportunity to incorporate network security concepts from the contest into the curriculum at your respective schools. Please look at the Facebook page or Twitter which has some information you need to prepare for success in this event.

If you have further questions, please feel free to contact us via email.

PRCCDC 2024 Schedule

Friday, March 22, 2024 – Competition Day 1	
7:00 AM – 8:00 AM	**Registration and Check in – Government ID required** Location: SUB
8:00 AM – 8:30 AM	**Welcome Breakfast and Opening Announcements** Location: SUB
8:45 AM – 9:00 AM	**Team Packet Review** Location: SUB - *Led by White Team* *Students are escorted to their rooms by Team Judge*
9:00 AM – 6:00 PM	**Competition Session Day 1** Students will compete through lunch. Boxed Lunches will be provided for all There are no breaks
6:00 PM - 6:15 PM	**Announcements if Needed** **End of Competition Day 1**

Saturday, March 23, 2024 – Competition Day 2	
7:00 AM – 8:00 AM	**Check-In Government ID required**
8:00 AM – 8:45 AM	**Breakfast** Location: SUB
9:00 AM – 6:00 PM	**Competition Session Day 2** Location: Assigned Rooms Boxed lunches will be provided for all
6:00 PM	**End of Competition Day 2**
6:00 PM – 6:30 PM	**Team Debrief with Team Judge and Team Coach and Red Team** Location: Competition Rooms

Sunday, March 24, 2021 - Competition Day 3	
10:00 AM – 11:30 AM	**Job Fair** Location: SUB
11:30 AM – 1:00 PM	**Lunch and Closing Ceremony** Location: SUB

Competition Overview

PRCCDC is a 3 day event focusing on the operational aspects of managing and protecting an existing commercial network. It provides a unique opportunity for students and industry professionals to interact and discuss many of the security and operational challenges the students will face as they enter the job market.

You are working as the network and security administrators for a company. Hackers and attempting to access the valuable and classified information on your network including attacking your computer systems. In the midst of all the turmoil, you have to keep services such as your website, email, etc. up and running.

Mission

The Collegiate Cyber Defense Competition system provides institutions with an information assurance or computer security curriculum a controlled, competitive environment to assess their students' depth of understanding and operational competency in managing the challenges inherent in protecting business information systems and a corporate network infrastructure.

Event Objectives

- Build a meaningful mechanism by which institutions of higher education may evaluate their programs.
- Provide an educational venue in which students are able to apply the theory and practical skills they have learned in their course work.
- Foster a spirit of teamwork, ethical behavior, and effective communication both within and across teams.
- Create interest and awareness of the information assurance profession among participating institutions and students.

Terminology

- **Gold Team:** The organizing team. Any issues regarding rules that cannot be resolved by the White team goes to them. Any disqualifications or expulsions from the event are done by the Gold Team with the Regional Director having the tie breaking vote.
- **White Team:** The competition officials that evaluate team performance and enforce rule compliance.
- **Red Team:** The penetration testing professionals simulating external hackers attempting to gain unauthorized access. The Red Team Lead has the right to ask any Red Team member to cease and desist actions that are not in the best interests of the students. After consulting the Gold Team the Red Team Lead can bar a Red Team member.
- **Orange/Social Engineering Team:** These are customer service professionals who will evaluate how you respond to irate or technically inept customers
- **Black Team:** The competition support members that provide technical and administrative support.
- **Blue Team/Competition Team:** The student teams competing in the CCDC event.
- **Team Captain:** A student member of the Blue Team identified as the primary liaison between the Blue Team and the White Team.

- **Team Co-Captain:** A student member of the Blue Team identified as the backup liaison between the Blue Team and the White Team, should the Team Captain be unavailable.
- **Team Representatives / Advisors:** A faculty or staff representative of the Blue Team's host institution.

PRCCDC Regional Competition Rules

Attendance
Teams must be accompanied by a faculty or staff member who has authority such as medical emergencies for the student attendees. Each school is expected to have signed the necessary forms required by their school for an away event or field trip.

Prohibited Items
The following items may not be accessed during the competition.

- Backpacks, Fanny Packs, Purses
- Cell Phones and Smartphones
- iPads, Electronic Devices of any kind
- USB drives, CDs, DVDs, and any other External Storage Devices
- Any smart or wearable computer devices including smart watches, necklaces, jackets
- No earbuds

Prohibited Activities
Please note that in addition to the national CCDC rules, Blue Teams may not:

- Access drives that are not on their specific network; this includes but is not limited to the Red Team/ Penetration team, White team storage areas, Orange Team, Blue Teams, or Scoring Engine directories and storage areas.
- Access private internet repositories or storage that require a login.
- Communicate with third parties through online discussion, applications (like Slack), or messaging boards for any assistance.

Professionalism
Corporate sponsors will likely observe competition rooms. Some are actively recruiting for employment or internship opportunities. Competitors should conduct themselves professionally, dress appropriately, use professional language, and practice good hygiene.

The competition is a simulation of a business environment that is casual dress. You should dress comfortably, as long as you still look dressed for work. For example, consider wearing at least nice Dockers or jeans and polo shirt or blouse. Dress for the job you want. For more examples, visit the link: Examples of casual dress attire can be found at http://humanresources.about.com/od/dresscodesforwork/ig/Casual-Dress-Code/

Scoring Overview

PRCCDC scoring is based on one or more of the following primary objectives:

- **Availability:** Maintain high availability of your systems throughout
- **Injects:** Completing assigned business tasks graded by the White Team
- **Social Engineering:** students are expected to deal with social engineering measures appropriately.
- **Attacks:** Preventing unauthorized access by the Red Team / network intrusion teams
- **Incident Reports:** Documenting and remediating Red Team attacks
- **Change Reports:** Documenting and notification of network changes

Maintaining these objectives will earn the team points towards their final score; successful Red Team attacks, breaches, or unavailability will reduce the team's final score. Due to the importance of business functionality, availability and injects are weighted equally.

No questions about the team's services or scores will be answered. Teams should monitor their own performance by tracking primary objectives.

Availability Scoring

Services are expected to be available and functional at all times for an optimal score. Those services and systems are located in the team packet given at the start of the competition. The Scoring Engine checks for availability at random intervals.

Errant DNS records can have a negative effect on availability which impacts scores. The team's authoritative DNS server is used to determine the location of required services, so it is important to ensure DNS records are kept accurate and available during the competition.

Failure to document password changes can negatively affect availability scores. Additionally, the team must document all password changes for required services. Depending on the service being checked, the Scoring Engine may simulate logging in as one of the team's user accounts. The proper procedures for submitting password changes will be provided at the start of the competition.

Inject Scoring

Throughout the competition, the White Team will assign business tasks known as injects to the teams. Injects vary in nature and points will be weighted based upon their difficulty, criticality, and urgency.

Examples of injects used in past competitions include:

- Formulate a corporate policy to address the use of social networking
- Rebrand the company's web site including all text, images, logos, and domain names
- Create new users and groups with specific permissions
- Setup an FTP service for 2 hours with a given username and password
- Install a given software package on the CEO's desktop

▪   Block specific ports, protocols, or IP addresses at the network perimeter

Injects may be scored by rank ordering the team's performance against all competitors, may be scored as pass/fail with points awarded on an all-or-nothing basis, or may contain multiple parts with points awarded for the completion of each part. It is important to complete each inject before the associated deadline as no points will be awarded for late injects. However, it may be worthwhile to complete an inject after the deadline has passed (at a penalty) because many injects build upon each other.

Each team with have one or more dedicated judges assigned by the White Team. During the competition, these team judges will answer clarifying questions about injects and competition rules. If needed, the team judges will consult the White Team Room Leaders and ultimately the White Team Captain. The White Team Captain has final authority on all questions and decisions.

Inject Time Management

The White Team may give competitors the option of working on certain business tasks outside of the official competition hours. For example, an inject assigned on the first day of the competition may be due at the start of the second day. The business tasks for these multi-day injects are general in nature and can be completed without access to the competition environment. To avoid missing the deadline and scoring zero points for these injects, competitors are strongly encouraged to submit them either before the end of the first competition day or during their spare time between the three competition days.

Any team planning to take advantage of the opportunity to work on injects after hours has the responsibility to secure access to an Internet-connected computer between the three competition days. Your hotel may or may not have internet access. **In no case will competitors have access to the PRCCDC competition environment or computing resources outside of the official competition hours.**

Attack Scoring

The attacks component, which measures successful penetrations by the Red Team, reduces the team's final score. Red Team actions are cumulative, with only the highest level of compromise scored for each attack. The point deduction for a particular attack is based on three factors:

▪   The criticality of the affected device (e.g., attacks against the Domain Controller result in a larger penalty than attacks against a workstation)

▪   The level of compromise (e.g., root-level access results in a larger penalty than user-level access)

▪   The method of attack (e.g., password guessing attacks result in a larger penalty than buffer overflow exploits)

Examples of successful Red Team actions that may result in point deductions for the team include:

▪   Obtaining user-level or administrator-level (root) access to a team's system

▪   Recovering account credentials (usernames and passwords, in encrypted or unencrypted form)

▪   Recovering critical information from a team system (configuration files, corporate data, personally identifiable customer information, etc.)

- ▪ Defacing the team's company website
- ▪ Manipulating the team's databases

Incident Reporting

To reduce the penalty for a particular attack, the team may submit an Incident Report contain a description of what occurred (including source and destination IP addresses, timelines of activity, passwords cracked, access or information obtained, damage done, etc.), a discussion of what was affected, and a remediation plan. A thorough Incident Report that correctly identifies and addresses a successful Red Team attack may reduce the penalty for that particular event by 50%. No partial points will be given for incomplete or vague Incident Reports. The proper procedures for submitting Incident Reports will be provided at the start of the competition.

PRCCDC Rules

In addition to the National CCDC rules shown below, the PRCCDC has some specific rules. The items that are specific to our region are as follows:

1. **All competitors/ advisors/ faculty/ volunteers must show valid government picture ID when checking in.**
2. If a person is not on the final list of 12 submitted by the due date   they will NOT be allowed to compete.
3. If a team's faculty or staff advisor is not present, the team CANNOT compete. The person must have written authorization and be an employee of the school. The person must arrive by 8 am before the teams are led to their competition room. That person must remain on campus during the competition in case of an emergency or issue.
4. The advisor must vet the students who are registering to compete that they meet full time status or are enrolled part time if it is their last semester or within two quarters of graduating. See eligibility requirements in the National Rules section.
5. Once the team has checked in full, any alternates must leave the campus.   It is recommended schools not bring alternates to the campus. Only competitors, advisors, sponsors, Gold, Black, White, Red and Orange teams will be allowed in the competition building (Building 30) at any time unless authorized by the Gold Team. These include but are not limited to tours, media, etc.
6. *Students and Coaches/Advisors of schools* who are eligible to compete in PRCCDC may not volunteer on the Red, Orange or White team. If they have served on the Red team in another region, PRCCDC must be informed prior to the close of registration. As the designers of PRCCDC, students at Highline College are ineligible to compete in CCDC events.
7. Blue Teams may not ping, scan, access or download from the network or drives of other Blue Teams, the White Team, the Red Team or the Infrastructure unless specifically given permission to do so. Doing so will result in an immediate Black Card which means expulsion from the event.
8. Blue Teams may not add additional VMs during the course of the competition.
9. As stated in the National CCDC rules, competitors may NOT access a public or private site created by their team or friend of their team, or other team during the competition. They may access existing public forums that do not require membership or login.
10. GitHub, and code repositories like it, may not be used to stage code or patches by blue teams. GitHub, and code repositories like it, can only be used to access publicly available tools and resources clearly visible and searchable by all teams. All tools and code must meet the CCDC national rules standards to be used without penalty or threat of disqualification.
11. Note that portions of the network traffic are recorded and will be used for research and/or educational purposes. Use of private email, passwords, etc. maybe captured and/or discovered.
12. The Gold Team has final say on disqualification of a person or team and / or expulsion from the event.
13. Scores will be maintained by the competition officials and may be shared at the end of the competition. There will be no running totals provided during the competition. At the end of each day, the teams may be provided with their "uptime" which does NOT reflect Red Team or inject scoring. Student teams will have access to their real time service status.

14. School journalists or newspapers may only be present during the opening and closing ceremonies. No video or audio recording is allowed during the event with the exception of local media such as King5, KIRO7, or similar news crews who are escorted.

15. Blue Teams may not remove reference materials like books, guides, and documentation including Blue Team Packets from the rooms once they are brought into the competition.

CCDC National Competition Rules

2024 Rules

The following are the approved national rules for the 2024 CCDC season. Please refer to the official rules for your specific CCDC event for any local variations.

Throughout these rules, the following terms are used:

- Gold Team/Operations Team - competition officials that organize, run, and manage the competition.
- White Team - competition officials that observe team performance in their competition area and evaluate team performance and rule compliance.
- Red Team - penetration testing professionals simulating external hackers attempting to gain unauthorized access to competition teams' systems.
- Black Team - competition support members that provide technical support, pick-up and deliver communications, and provide overall administrative support to the competition.
- Blue Team/Competition Team - the institution competitive teams consisting of students competing in a CCDC event.
- Team Captain - a student member of the Blue Team identified as the primary liaison between the Blue Team and the White Team.
- Team Co-Captain - a student member of the Blue Team identified as the secondary or backup liaison between the Blue Team and the White Team, should the Team Captain be unavailable (i.e. not in the competition room).
- Team representatives - a faculty or staff representative of the Blue Team's host institution responsible for serving as a liaison between competition officials and the Blue Team's institution.

1. **Competitor Eligibility**
   a. Competitors in CCDC events must be full-time students of the institution they are representing.
      i. Team members must qualify as full-time students <u>as defined by the institution they are attending</u>.
      ii. Individual competitors may participate in CCDC events for a maximum of five seasons. A CCDC season is defined as the period of time between the start of the first state event and the completion of the National CCDC event. Participation on a team in any CCDC event during a given season counts as participation for that entire season.

      iii.   A competitor in their final semester prior to graduation is exempt from the full-time student requirement and may compete in CCDC events as a part-time student provided the competitor has a demonstrated record of full-time attendance for the previous semester or quarter.

      iv.   If a team member competes in a qualifying, state, or regional CCDC event and graduates before the next CCDC event in the same season, that team member will be allowed to continue to compete at CCDC events during the same season should their team win and advance to the next round of competition.

b.   Competitors may only be a member of one team per CCDC season.

c.   A team member may not participate in any role at CCDC events held outside the region in which their team competes during the same CCDC season.

d.   Individuals who have participated in previous CCDC events in any role other than as a competitor must obtain eligibility approval from the director of the region in which their team competes prior to being added to the team roster. Once a candidate's eligibility has been approved they will remain eligible for all CCDC events during the same season.

2. **Team Composition**

a.   Each team must submit a roster of up to 12 competitors to the designated registration system. Rosters must be submitted by published deadlines and include a coach who is a staff or faculty member of the institution the team is representing. All competitors on the roster must meet all stated eligibility requirements. No changes to the team roster will be permitted after the team competes in their first CCDC event. The competition team must be chosen from the submitted roster. A competition team is defined as the group of individuals competing in a CCDC event.

b.   Each competition team may consist of up to eight (8) members chosen from the submitted roster.

c.   Each competition team may have no more than two (2) graduate students as team members.

d.   If the member of a competition team advancing to a qualifying, state, regional, or national competition is unable to attend that competition, that team may substitute another student from the roster in their place prior to the start of that competition.

e.   Once a CCDC event has begun, a team must complete the competition with the team that started the competition. Substitutions, additions, or removals of team members are prohibited except for extreme circumstances.

      i.   Team Representatives must petition the Competiton Director in writing for the right to perform a change to the competition team.

      ii.   The Competition Director must approve any substitutions or additions prior to those actions occurring.

f.   Teams or team members arriving after an event's official start time, for reasons beyond their control, may be allowed to join the competition provided a substitution has not already been made. Event coordinators will review the reason for tardiness and make the final determination.

g.   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. In the event of the Team Captain's absence, teams must have an

identified team liaison serving as the captain in the competition space at all times during competition hours.

h. An institution is only allowed to compete one team in any CCDC event or season.

i. A CCDC team may only compete in one region during any given CCDC season.

j. Exhibition teams are not eligible to win any CCDC event and will not be considered for placement rankings in any CCDC event.

3. **Team Representatives**

a. Each team must have at least one representative present at every CCDC event. The representative must be a faculty or staff member of the institution the team is representing.

b. Once a CCDC event has started, representatives may not coach, assist, or advise their team until the completion of that event (including overnight hours for multi-day competitions).

c. Representatives may not enter their team's competition space during any CCDC event.

d. Representatives must not interfere with any other competing team.

e. The representative, or any non-team member, must not discuss any aspect of the competition event, specifically event injections, configurations, operations, team performance or red team functions, with their team during CCDC competition hours and must not attempt to influence their team's performance in any way.

f. Team representatives/coaches may not participate on the Red Team, Gold Team, Operations Team, Black Team, White Team, or Orange Team at any CCDC event.

4. **Competition Conduct**

a. Throughout the competition, Operations and White Team members will occasionally need access to a team's system(s) for scoring, troubleshooting, etc. Teams must immediately allow Operations and White Team members' access when requested.

b. Teams must not connect any devices or peripherals to the competition network unless specifically authorized to do so by Operations or White Team members.

c. Teams may not modify the hardware configurations of competition systems. Teams must not open the case of any server, printer, PC, monitor, KVM, router, switch, firewall, or any other piece of equipment used during the competition. All hardware related questions and issues should be referred to the White Team.

d. Teams may not remove **any** item from the competition area unless specifically authorized to do so by Operations or White Team members including items brought into the team areas at the start of the competition.

e. Team members are forbidden from entering or attempting to enter another team's competition workspace or room during CCDC events.

f. Teams must compete without "outside assistance" from non-team members including team representatives from the start of the competition to the end of the competition (including overnight hours for multi-day events). All private communications (calls, emails, chat, texting, directed emails, forum postings, conversations, requests for assistance, etc) with non-team members including team representatives that would help the team gain an unfair advantage are not allowed and are grounds for disqualification and/or a penalty assigned to the appropriate team.

g. Printed reference materials (books, magazines, checklists) are permitted in competition areas and teams may bring printed reference materials to the competition.

h. Team representatives, 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/or a penalty will be assigned to the appropriate team.

i. 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 during official competition events such as breakfasts, dinners, mixers, and receptions that occur outside of live competition hours.

j. Teams are free to examine their own systems but no offensive activity against any system outside the team's assigned network(s), including those of other CCDC teams, will be tolerated. Any team performing offensive activity against any system outside the team's assigned network(s) will be immediately <u>disqualified</u> 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 Operations Team before performing those actions.

k. 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.

l. All team members will wear badges identifying team affiliation at all times during competition hours.

m. Only Operations Team/White Team members will be allowed in competition areas outside of competition hours.

5. **Internet Usage**

a. Internet resources such as FAQs, how-to's, existing forums and responses, and company websites, are completely valid for competition use provided there is no fee required to access those resources and access to those resources has not been granted based on a previous membership, purchase, or fee. Only resources that could reasonably be available to all teams are permitted. For example, accessing Cisco resources through a CCO account would not be permitted but searching a public Cisco support forum would be permitted. Public sites such as Security Focus or Packetstorm are acceptable. Only public resources that every team could access if they chose to are permitted.

b. Teams may not use any external, private electronic staging area or FTP site for patches, software, etc. during the competition. Teams are not allowed to access private Internet-accessible libraries, FTP sites, web sites, network storage, email accounts, or shared drives during the competition. All Internet resources used during the competition must be freely available to all other teams. The use of external collaboration and storage environments such as Google Docs/Drive is prohibited unless the environment was provided by and is administered by competition

officials. Accessing private staging areas or email accounts is grounds for disqualification and/or a penalty assigned to the appropriate team.

c. No peer to peer or distributed file sharing clients or servers are permitted on competition networks unless specifically authorized by the competition officials.

d. Internet activity, where allowed, will be monitored and any team member caught viewing inappropriate or unauthorized content will be subject to disqualification and/or a penalty assigned to the appropriate team. This includes direct contact with outside sources through AIM/chat/email or any other public or non-public services including sites such as Facebook. For the purposes of this competition inappropriate content includes pornography or explicit materials, pirated media files, 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.

e. All network activity that takes place on the competition network may be logged and subject to release. Competition officials are not responsible for the security of any information, including login credentials, which competitors place on the competition network.

f. Scripts, executables, tools, and programs written by active team members may be used in CCDC events provided:

  i. The scripts, executables, tools, and programs have been published as a publicly available resource on a public and non-university affiliated site such as GitHub or SourceForge for at least 3 months prior to their use in any CCDC event.

  ii. Teams must send the public links and descriptions of the team-written scripts, executables, tools, and programs to the appropriate competition director at least 30 days prior to their use in any CCDC event. Development must be "frozen" at time of submission with no modifications or updates until after the team competes in their last CCDC event of that season.

  iii. Teams must consent to the distribution of the submitted links and descriptions to all other teams competing in the same CCDC event where the team-written scripts, executables, tools, and programs will be used.

  iv. Team written tools, scripts, or executables that use resources outside of the competition environment other than simple DNS lookups are prohibited (i.e. tools that use cloud services or cloud processing outside of the competition environment are prohibited).

  v. Team written tools, scripts, or executables that transmit data outside of the competition environment (such as log data) must be declared to competition officials at least 30 days prior to their use in any CCDC event. Teams must obtain written authorization from competition officials prior to using these tools in any CCDC event. Approval or rejection of these tools is at the sole discretion of competition officials.

6. **Permitted Materials**

a. No memory sticks, flash drives, removable drives, CDROMs, electronic media, or other similar electronic devices are allowed in the room during the competition unless specifically authorized by the Operations or White Team in advance. Any violation of

these rules will result in disqualification of the team member and/or a penalty assigned to the appropriate team.

b. Teams may not bring any type of computer, laptop, tablet, PDA, cell phone, smart phone, or wireless device into the competition area unless specifically authorized by the Operations or White Team in advance. Any violation of these rules will result in disqualification of the team member and/or a penalty assigned to the appropriate team.

c. Printed reference materials (books, magazines, checklists) are permitted in competition areas and teams may bring printed reference materials to the competition as specified by the competition officials.

7. **Professional Conduct**

a. All participants, including competitors, coaches, White Team, Red Team, Ops Team, and Gold Team members, are expected to behave professionally at all times during all CCDC events including preparation meetings, receptions, mixers, banquets, competitions and so on.

b. In addition to published CCDC rules, Host Site policies and rules apply throughout the competition and must be respected by all CCDC participants.

c. All CCDC events are alcohol free events. No drinking is permitted at any time during competition hours.

d. Activities such as swearing, consumption of alcohol or illegal drugs, disrespectful or unruly behavior, sexual harassment, improper physical contact, becoming argumentative, willful violence, or willful physical damage have no place at the competition and will not be tolerated.

e. Violations of the rules can be deemed unprofessional conduct if determined to be intentional or malicious by competition officials.

f. Competitors behaving in an unprofessional manner may receive a warning from the White Team, Gold Team, or Operations Team for their first offense. For egregious actions or for subsequent violations following a warning, competitors may have a penalty assessed against their team, be disqualified, and/or expelled from the competition site. Competitors expelled for unprofessional conduct will be banned from future CCDC competitions for a period of no less than 12 months from the date of their expulsion.

g. Individual(s), other than competitors, behaving in an unprofessional manner may be warned against such behavior by the White Team or asked to leave the competition entirely by the Competition Director, the Operations Team, or Gold Team.

8. **Questions, Disputes, and Disclosures**

a. PRIOR TO THE COMPETITION: Team captains are encouraged to work with the Competition Director and their staff to resolve any questions regarding the rules of the competition or scoring methods before the competition begins.

b. DURING THE COMPETITION: Protests by any team must be presented in writing by the Team Captain to the White Team as soon as possible. The competition officials will be the final arbitrators for any protests or questions arising before, during, or after the competition. Rulings by the competition officials are final. All competition results are official and final as of the Closing Ceremony.

c. 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 or team awards.

d. 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.

e. All competition materials including injects, scoring sheets, and team-generated reports and documents must remain in the competition area. Only materials brought into the competition area by the student teams may be removed after the competition concludes.

9. **Scoring**

a. Scoring will be based on keeping required services up, controlling/preventing un-authorized access, and completing business tasks that will be provided throughout the competition. Teams accumulate points by successfully completing injects and maintaining services. Teams lose points by violating service level agreements, usage of recovery services, and successful penetrations by the Red Team.

b. Scores will be maintained by the competition officials and may be shared at the end of the competition. There will be no running totals provided during the competition. Team rankings may be provided at the beginning of each competition day.

c. Any team action that interrupts the scoring system is exclusively the responsibility of that team and will result in a lower score. Any team member that modifies a competition system or system component, with or without intent, in order to mislead the scoring engine into assessing a system or service as operational, when in fact it is not, may be disqualified and/or the team assessed penalties. Should any question arise about scoring, the scoring engine, or how scoring functions, the Team Captain should immediately contact the competition officials to address the issue.

d. Teams are strongly encouraged to provide incident reports for each Red Team incident they detect. Incident reports can be completed as needed throughout the competition and presented to the White Team for collection. Incident reports must contain a description of what occurred (including source and destination IP addresses, timelines of activity, passwords cracked, access obtained, damage done, etc), a discussion of what was affected, and a remediation plan. A thorough incident report that correctly identifies and addresses a successful Red Team attack may reduce the Red Team penalty for that event – no partial points will be given for incomplete or vague incident reports.

10. **Remote/ Team Site Judging and Compliance**
With the advent of viable remote access technologies and virtualization, teams will have the ability to participate in CCDC events from their respective institutions. This section addresses policy for proper engagement in CCDC events for remote teams.

a.

a. One or more Remote Site Judge(s) must be assigned to the team site. At least one Remote Site Judge must be present at the remote site for the duration of the event in order to facilitate the

execution of the CCDC. The qualifications of Remote Site Judge are the same as Event Judge. Subject to the specifications of the remote competition, the responsibilities of the Remote Site Judge may include the following:

- i. Be present with the participating team to assure compliance with all event rules
- ii. Provide direction and clarification to the team as to rules and requirements
- iii. Establish communication with all Event Judges and provide status when requested
- iv. Provide technical assistance to remote teams regarding use of the remote system
- v. Review all equipment to be used during the remote competition for compliance with all event rules
- vi. Assure that the Team Captain has communicated to the Event Judges approval of initial system integrity and remote system functionality
- vii. Assist Event Judges in the resolution of grievances and disciplinary action, including possible disqualification, where needed
- viii. Report excessive misconduct to local security or police
- ix. Assess completion of various injects based on timeliness and quality when requested by Event Judges
- x. Act as a liaison to site personnel responsible for core networking and internet connectivity
- xi. Provide direct technical assistance to teams when requested by Event Judges
- xii. Provide feedback to students subsequent to the completion of the CCDC event

b. A recommendation for Remote Site Judge(s) is expected to be given from a Team representative of the participating institution to the CCDC Event Manager. Remote Site Judge(s) must not be currently employed, a student of, or otherwise affiliated with the participating institution, other than membership on an advisory board. CCDC Event Managers should also be apprised of a contact from the participating institution responsible for core networking and internet connectivity that will be available during the CCDC event.Remote teams are required to compete from a location with controlled access, i.e., a separate room or a portion of a room that is dedicated for use during the CCDC event. Workstations and internet access must comply with published requirements.