



The National Cyber League - Where Cybersecurity is a Passion

NCL 2019 Spring Team Game Scouting Report

Dear Bohan Zhang (Team "GotRoot?"),

Congratulations on a great NCL 2019 Spring Team Game!

National Cyber League (NCL)

The NCL was founded in May 2011 to provide an ongoing virtual training ground for collegiate students to develop, practice, and validate their cybersecurity skills. Using challenges designed around industry-recognized performance-based exam objectives and aligned with individual and team games, the NCL is a first-of-its-kind ongoing experiment in learning and gaming using next-generation high-fidelity simulation environments. Learn more about the NCL at www.nationalcyberleague.org. If you have any questions regarding the information in this report please inquire at info@nationalcyberleague.org.

NCL 2019 Spring Season

The NCL 2019 Spring Season was designed to develop and validate player knowledge and skills in preparation for further learning, career readiness, industry certifications, and other cybersecurity competitions. Hosted challenges in the NCL Gymnasiums were made available to all players and coaches and aligned to the games. The games were designed around performance-based exam objectives of the CompTIA Security+™ and EC-Council Certified Ethical Hacker (CEH) certifications.

The NCL 2019 Spring Season began with the Preseason round to group players into one of three competition brackets based on skill level: Gold (top 15% of all players nationally - 520 players), Silver (the next 35% of all players nationally - 1,263 players) or Bronze (the next 50% of all players nationally - 1,815 players). Players who did not participate in the Preseason were not bracketed or ranked. This made the Individual Game more engaging by grouping players with similar knowledge and skill levels.

At the beginning of the NCL 2019 Spring Season, 4,844 students/players and 357 faculty/coaches from more than 350 two- and four-year schools across all 50 U.S. states registered to play.

The NCL 2019 Spring Season was powered by Cyber Skyline's cloud-based skills evaluation platform. Cyber Skyline hosted the scenario-driven cybersecurity challenges for all players to compete and track their progress in real-time.

To validate the contents of this report, please access:
cyberskyline.com/report/QC258M6P3EU5





The National Cyber League - Where Cybersecurity is a Passion

The Individual Game (formerly Regular Season) Capture the Flag (CTF) event took place from November 2 through November 4. The Team Game (formerly Postseason) CTF event took place from November 16 through November 18. The games were conducted in real-time for students across the country.

NCL Scouting Report

What follows is a customized NCL Scouting Report of your performance in the NCL 2019 Spring Team Game. We hope you find it to be valuable in both confirming the skills you demonstrated competencies in, as well as identifying areas for improvement. In addition, the NCL Scouting Report can be used as part of any job application, as it provides an external validation of skills as demonstrated in competitive game play based on industry-recognized certification performance-based exam objectives.

The following definitions apply to your performance across a range of games, optimized for individuals:

- **Bracket Rank:** overall place within the Bracket
- **National Rank:** overall place with respect to all players, across all Brackets
- **Score:** total combined flag points; the higher the score, the higher the ranking
- **Flag Captures:** the combined number of successful flag captures/submissions
- **Flag Attempts:** the combined number of flags submitted to the Cyber Skyline Platform
- **Accuracy:** percentage of flag submissions that were correct. Formula: Total Flag Captures divided by Total Flag Attempts

Based on the performance of the top ranking member in the Individual Game, Bohan Zhang's team "GotRoot?" was placed into the **Gold Bracket** for the Team Game.

www.NationalCyberLeague.org

NCL 2019 IS POWERED BY





The National Cyber League - Where Cybersecurity is a Passion

NCL Spring 2019 Team Game

135 flags (3,000 points)

The top team for NCL Spring 2019 Team Game captured 135 flags out of 135 total flags, scoring 3,000 points out of 3,000 total points, and had an accuracy of 99.26%.

On average, teams captured 76 flags, 1,436 points, and had an accuracy of 66.38%.

National Rank	Gold Bracket Rank	Score	Flag Captures	Flag Attempts	Accuracy
87	60	2,260	115	193	59.59%

Individual Competencies

The following tables show the team's rank Nationally and by Bracket, based on the following modules:

1. Cryptography

Identify techniques used to encrypt or obfuscate messages and leverage tools to extract the plaintext.

2. Enumeration and Exploitation

Identify actionable exploits and vulnerabilities and use them to bypass the security measures in code and compiled binaries.

3. Log Analysis

Utilize the proper tools and techniques to establish a baseline for normal operation and identify malicious activities using log files from various services.

4. Network Traffic Analysis

Identify malicious and benign network traffic to demonstrate an understanding of potential security breaches.

5. Open Source Intelligence

Utilize publicly available information such as search engines, public repositories, social media, and more to gain in-depth knowledge on a topic or target.

6. Password Cracking

Identify types of password hashes and apply various techniques to efficiently determine plaintext passwords.

7. Scanning & Recon

Identify and use the proper tools to gain intelligence about a target including its services and potential vulnerabilities.

8. Web Application Exploitation

Identify actionable exploits and vulnerabilities and use them to bypass the security measures in online services.

9. Wireless Access Exploitation

Identify the security posture of wireless networks from network captures.

www.NationalCyberLeague.org

NCL 2019 IS POWERED BY

CYBER SKYLINE 



The National Cyber League - Where Cybersecurity is a Passion

Cryptography

16 flags (350 points)

The top team in this module captured 16 flags and scored 350 points with an accuracy of 100.00%.

On average, teams in this module captured 10 flags and scored 203 points with an accuracy of 76.96%.

Gold Bracket teams on average captured 14 flag and scored 308 points with an accuracy of 87.84%.

National Rank	Gold Bracket Rank	Score	Flag Captures	Flag Attempts	Accuracy
208	71	220	12	16	75.00%

Enumeration and Exploitation

5 flags (300 points)

The top team in this module captured 5 flags and scored 300 points with an accuracy of 100.00%.

On average, teams in this module captured 2 flags and scored 67 points with an accuracy of 53.63%.

Gold Bracket teams on average captured 4 flag and scored 173 points with an accuracy of 80.01%.

National Rank	Gold Bracket Rank	Score	Flag Captures	Flag Attempts	Accuracy
107	59	150	4	11	36.36%

Log Analysis

17 flags (400 points)

The top team in this module captured 17 flags and scored 400 points with an accuracy of 100.00%.

On average, teams in this module captured 14 flags and scored 322 points with an accuracy of 74.83%.

Gold Bracket teams on average captured 17 flag and scored 387 points with an accuracy of 87.38%.

National Rank	Gold Bracket Rank	Score	Flag Captures	Flag Attempts	Accuracy
200	71	400	17	35	48.57%

www.NationalCyberLeague.org

NCL 2019 IS POWERED BY





The National Cyber League - Where Cybersecurity is a Passion

Network Traffic Analysis

21 flags (400 points)

The top team in this module captured 21 flags and scored 400 points with an accuracy of 100.00%.

On average, teams in this module captured 12 flags and scored 211 points with an accuracy of 55.20%.

Gold Bracket teams on average captured 17 flag and scored 314 points with an accuracy of 66.39%.

National Rank	Gold Bracket Rank	Score	Flag Captures	Flag Attempts	Accuracy
129	61	280	17	53	32.08%

Open Source Intelligence

17 flags (235 points)

The top team in this module captured 17 flags and scored 235 points with an accuracy of 100.00%.

On average, teams in this module captured 13 flags and scored 167 points with an accuracy of 69.72%.

Gold Bracket teams on average captured 16 flag and scored 219 points with an accuracy of 84.82%.

National Rank	Gold Bracket Rank	Score	Flag Captures	Flag Attempts	Accuracy
43	24	235	17	18	94.44%

Password Cracking

17 flags (375 points)

The top team in this module captured 17 flags and scored 375 points with an accuracy of 100.00%.

On average, teams in this module captured 8 flags and scored 138 points with an accuracy of 91.33%.

Gold Bracket teams on average captured 12 flag and scored 230 points with an accuracy of 96.44%.

National Rank	Gold Bracket Rank	Score	Flag Captures	Flag Attempts	Accuracy
180	65	165	9	10	90.00%

www.NationalCyberLeague.org

NCL 2019 IS POWERED BY





The National Cyber League - Where Cybersecurity is a Passion

Scanning & Recon

18 flags (280 points)

The top team in this module captured 18 flags and scored 280 points with an accuracy of 100.00%.
On average, teams in this module captured 12 flags and scored 169 points with an accuracy of 66.88%.
Gold Bracket teams on average captured 16 flag and scored 248 points with an accuracy of 75.22%.

National Rank	Gold Bracket Rank	Score	Flag Captures	Flag Attempts	Accuracy
37	28	280	18	25	72.00%

Web Application Exploitation

10 flags (285 points)

The top team in this module captured 10 flags and scored 285 points with an accuracy of 100.00%.
On average, teams in this module captured 4 flags and scored 80 points with an accuracy of 62.20%.
Gold Bracket teams on average captured 7 flag and scored 158 points with an accuracy of 81.34%.

National Rank	Gold Bracket Rank	Score	Flag Captures	Flag Attempts	Accuracy
74	45	155	7	11	63.64%

Wireless Access Exploitation

13 flags (275 points)

The top team in this module captured 13 flags and scored 275 points with an accuracy of 100.00%.
On average, teams in this module captured 10 flags and scored 184 points with an accuracy of 72.99%.
Gold Bracket teams on average captured 13 flag and scored 269 points with an accuracy of 90.30%.

National Rank	Gold Bracket Rank	Score	Flag Captures	Flag Attempts	Accuracy
15	10	275	13	13	100.00%

www.NationalCyberLeague.org

NCL 2019 IS POWERED BY





The National Cyber League - Where Cybersecurity is a Passion

Thank you for your participation in the NCL 2019 Spring Team Game! We hope you will continue to develop your knowledge and skills and make meaningful contributions as part of the Information Security workforce!

Dr. Dan Manson
NCL Commissioner

www.NationalCyberLeague.org

NCL 2019 IS POWERED BY

