NCL Spring 2020 Team Game Scouting Report

Dear William Seeley (Team "Pwning Exploits Taking Names - [SNHU]"),

Congratulations on a great NCL 2020 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. The NCL is a next-generation learning and gaming environment using high-fidelity and scenario-based challenges from Cyber Skyline. The challenges are designed around industry recognized and performance-based exam objectives to further develop student skills. 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 2020 Spring Season

The NCL 2020 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 Gymnasium 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+™ certification and the National Initiative for Cybersecurity Education (NICE) Cybersecurity Workforce Framework published by the National Institute of Standards and Technology (NIST).

The NCL 2020 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 - 665 players), Silver (the next 35% of all players nationally - 1540 players) or Bronze (the next 50% of all players nationally - 2193 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 2020 Spring Season, 5900 students/players and 415 faculty/coaches from more than 460 two- and four-year schools across all 50 U.S. states registered to play.

The Individual Game Capture the Flag (CTF) event took place from April 3 through April 5. The Team Game CTF event took place from April 17 through April 19. The games were conducted in real-time for students across the country.

The NCL 2020 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 this report, please access: cyberskyline.com/report/P99V12R6LFYU

Thank you for your participation in the NCL 2020 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

William Seeley
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NCL Scouting Report

What follows is a customized NCL Scouting Report of your performance in the NCL 2020 Spring Team Game. We hope you find it to be valuable in both confirming your skills and 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 gameplay based on industry-recognized certification exam and framework objectives.

The following definitions apply to your performance across a range of cybersecurity scenarios

- **National Rank:** overall place with respect to all players, across all Brackets
- **Bracket Rank:** overall place within the Bracket
- **Performance Score:** total points earned; the higher the score, the higher the ranking
- **Accuracy:** percentage of flag submissions that were correct (total flag captures divided by total flag attempts).
- **Completion:** percentage of possible flags submitted (total flag captures divided by total possible flags).

The following are the categories of cybersecurity scenarios that you were evaluated against:

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
   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.

Based on the performance of the top ranking member in the Individual Game, William Seeley's team "**Pwning Exploits Taking Names - [SNHU]**" was placed into the **Gold Bracket** for the Team Game.

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NCL Spring 2020 Team Game

The NCL Team Game is designed for student players nationwide to compete in realtime in the categories listed below. The Team Game promotes camaraderie and evaluates the collective technical cybersecurity skills of the team members.

25 TH PLACE OUT OF 925
NATIONAL RANK

24 TH PLACE OUT OF 118
GOLD BRACKET RANK

2520 POINTS OUT OF 3000
PERFORMANCE SCORE

76.5%
ACCURACY

91.4%
COMPLETION

98th
National Percentile

80th
Gold Bracket Percentile

Averages
National: 1044.3
Gold Bracket: 2086.5

National: 58.0%
Gold Bracket: 74.7%

National: 45.3%
Gold Bracket: 80.1%

Cryptography	385 POINTS OUT OF 385	75.0% ACCURACY	COMPLETION: 100.0%
Enumeration and Exploitation	310 POINTS OUT OF 310	90.0% ACCURACY	COMPLETION: 100.0%
Log Analysis	380 POINTS OUT OF 405	75.0% ACCURACY	COMPLETION: 96.0%
Network Traffic Analysis	365 POINTS OUT OF 400	67.9% ACCURACY	COMPLETION: 90.5%
Open Source Intelligence	295 POINTS OUT OF 295	70.4% ACCURACY	COMPLETION: 100.0%
Password Cracking	245 POINTS OUT OF 335	100.0% ACCURACY	COMPLETION: 87.5%
Scanning	210 POINTS OUT OF 240	62.5% ACCURACY	COMPLETION: 90.9%
Web Application Exploitation	25 POINTS OUT OF 325	100.0% ACCURACY	COMPLETION: 33.3%
Wireless Access Exploitation	205 POINTS OUT OF 205	86.7% ACCURACY	COMPLETION: 100.0%

Note: Survey module (100 points) was excluded from this report.

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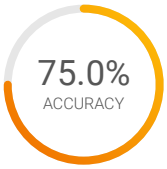
Cryptography Module

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

25 TH PLACE OUT OF 925
NATIONAL RANK

23 RD PLACE OUT OF 118
GOLD BRACKET RANK

385 POINTS OUT OF 385
PERFORMANCE SCORE



98th
National Percentile

81 st
Gold Bracket Percentile

Averages
National: 163.2
Gold Bracket: 291.1

National: 79.4%
Gold Bracket: 84.3%

National: 46.7%
Gold Bracket: 79.9%

Decoding 1 (Easy)	25 POINTS OUT OF 25	100.0% ACCURACY	COMPLETION: 100.0%
Decoding 2 (Easy)	20 POINTS OUT OF 20	100.0% ACCURACY	COMPLETION: 100.0%
Decoding 3 (Medium)	30 POINTS OUT OF 30	100.0% ACCURACY	COMPLETION: 100.0%
Decoding 4 (Medium)	45 POINTS OUT OF 45	100.0% ACCURACY	COMPLETION: 100.0%
Decoding 5 (Hard)	75 POINTS OUT OF 75	100.0% ACCURACY	COMPLETION: 100.0%
Signing (Medium)	100 POINTS OUT OF 100	50.0% ACCURACY	COMPLETION: 100.0%
Stego (Medium)	30 POINTS OUT OF 30	100.0% ACCURACY	COMPLETION: 100.0%
Database Dump (Hard)	60 POINTS OUT OF 60	100.0% ACCURACY	COMPLETION: 100.0%

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Enumeration and Exploitation Module

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

30 TH PLACE OUT OF 925
NATIONAL RANK

29 TH PLACE OUT OF 118
GOLD BRACKET RANK

310 POINTS OUT OF 310
PERFORMANCE SCORE

90.0% ACCURACY
National: 49.5%
Gold Bracket: 80.0%

100.0% COMPLETION
National: 34.8%
Gold Bracket: 74.5%

97th
National Percentile

76th
Gold Bracket Percentile

Averages
National: 74.4
Gold Bracket: 209.1

Swish (Easy)	70 POINTS OUT OF 70	100.0% ACCURACY	COMPLETION: 100.0%
Redis (Medium)	110 POINTS OUT OF 110	66.7% ACCURACY	COMPLETION: 100.0%
Backdoor (Hard)	130 POINTS OUT OF 130	100.0% ACCURACY	COMPLETION: 100.0%

Log Analysis Module

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

41 ST PLACE OUT OF 925
NATIONAL RANK

33 RD PLACE OUT OF 118
GOLD BRACKET RANK

380 POINTS OUT OF 405
PERFORMANCE SCORE

75.0% ACCURACY
National: 53.8%
Gold Bracket: 68.8%

96.0% COMPLETION
National: 47.3%
Gold Bracket: 84.8%

96th
National Percentile

73rd
Gold Bracket Percentile

Averages
National: 178.5
Gold Bracket: 332.7

Login (Easy)	105 POINTS OUT OF 105	100.0% ACCURACY	COMPLETION: 100.0%
AWS CloudFront (Medium)	140 POINTS OUT OF 140	68.8% ACCURACY	COMPLETION: 100.0%
Calls (Hard)	135 POINTS OUT OF 160	70.0% ACCURACY	COMPLETION: 87.5%

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Network Traffic Analysis Module

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

65 TH PLACE OUT OF 925
NATIONAL RANK

53 RD PLACE OUT OF 118
GOLD BRACKET RANK

365 POINTS OUT OF 400
PERFORMANCE SCORE

67.9% ACCURACY

90.5% COMPLETION

93rd
National Percentile

56th
Gold Bracket Percentile

Averages
National: 172.6
Gold Bracket: 319.2

National: 54.0%
Gold Bracket: 64.8%

National: 57.5%
Gold Bracket: 86.7%

Weather (Easy)	85 POINTS OUT OF 85	100.0% ACCURACY	COMPLETION: 100.0%
BGP (Medium)	50 POINTS OUT OF 85	27.3% ACCURACY	COMPLETION: 60.0%
Packet Dissection (Medium)	110 POINTS OUT OF 110	83.3% ACCURACY	COMPLETION: 100.0%
Ping (Hard)	120 POINTS OUT OF 120	100.0% ACCURACY	COMPLETION: 100.0%

Open Source Intelligence Module

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

40 TH PLACE OUT OF 925
NATIONAL RANK

33 RD PLACE OUT OF 118
GOLD BRACKET RANK

295 POINTS OUT OF 295
PERFORMANCE SCORE

70.4% ACCURACY

100.0% COMPLETION

96th
National Percentile

73rd
Gold Bracket Percentile

Averages
National: 160.6
Gold Bracket: 245.4

National: 57.7%
Gold Bracket: 71.6%

National: 69.7%
Gold Bracket: 89.8%

Rules of Conduct (Easy)	25 POINTS OUT OF 25	100.0% ACCURACY	COMPLETION: 100.0%
Github (Easy)	65 POINTS OUT OF 65	66.7% ACCURACY	COMPLETION: 100.0%
Targets (Medium)	60 POINTS OUT OF 60	75.0% ACCURACY	COMPLETION: 100.0%
Standard Numbers (Medium)	70 POINTS OUT OF 70	60.0% ACCURACY	COMPLETION: 100.0%
Codes (Hard)	75 POINTS OUT OF 75	50.0% ACCURACY	COMPLETION: 100.0%

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Password Cracking Module

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

103 RD PLACE OUT OF 925
NATIONAL RANK

64 TH PLACE OUT OF 118
GOLD BRACKET RANK

245 POINTS OUT OF 335
PERFORMANCE SCORE

100.0% ACCURACY

87.5% COMPLETION

89th
National Percentile

46th
Gold Bracket Percentile

Averages
National: 158.7
Gold Bracket: 248.0

National: 90.3%
Gold Bracket: 96.1%

National: 57.8%
Gold Bracket: 87.0%

Cracking 1 (Easy)	45 POINTS OUT OF 45	100.0% ACCURACY	COMPLETION: 100.0%
Cracking 2 (Easy)	45 POINTS OUT OF 45	100.0% ACCURACY	COMPLETION: 100.0%
Cracking 3 (Medium)	60 POINTS OUT OF 60	100.0% ACCURACY	COMPLETION: 100.0%
Cracking 4 (Hard)	35 POINTS OUT OF 125	100.0% ACCURACY	COMPLETION: 60.0%
PDF (Medium)	60 POINTS OUT OF 60	100.0% ACCURACY	COMPLETION: 100.0%

Scanning Module

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

47 TH PLACE OUT OF 925
NATIONAL RANK

43 RD PLACE OUT OF 118
GOLD BRACKET RANK

210 POINTS OUT OF 240
PERFORMANCE SCORE

62.5% ACCURACY

90.9% COMPLETION

95th
National Percentile

64th
Gold Bracket Percentile

Averages
National: 68.9
Gold Bracket: 159.8

National: 57.4%
Gold Bracket: 86.9%

National: 34.7%
Gold Bracket: 71.5%

Vroom (Easy)	60 POINTS OUT OF 60	100.0% ACCURACY	COMPLETION: 100.0%
Hidden Treasure (Medium)	90 POINTS OUT OF 90	100.0% ACCURACY	COMPLETION: 100.0%
Email Provider (Hard)	60 POINTS OUT OF 90	25.0% ACCURACY	COMPLETION: 66.7%

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Web Application Exploitation Module

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

78 TH PLACE OUT OF 925
NATIONAL RANK

53 RD PLACE OUT OF 118
GOLD BRACKET RANK

25 POINTS OUT OF 325
PERFORMANCE SCORE

100.0% ACCURACY

33.3% COMPLETION

92nd
National Percentile

56th
Gold Bracket Percentile

Averages
National: 19.1
Gold Bracket: 52.0

National: 40.0%
Gold Bracket: 81.4%

National: 17.7%
Gold Bracket: 40.5%

IOT (Easy)	10 POINTS OUT OF 100	100.0% ACCURACY	COMPLETION: 25.0%
VulnLabs v3 (Medium)	10 POINTS OUT OF 100	100.0% ACCURACY	COMPLETION: 33.3%
Enhanced Lottery (Hard)	5 POINTS OUT OF 125	100.0% ACCURACY	COMPLETION: 50.0%

Wireless Access Exploitation Module

Identify the security posture of wireless networks from network captures.

72 ND PLACE OUT OF 925
NATIONAL RANK

55 TH PLACE OUT OF 118
GOLD BRACKET RANK

205 POINTS OUT OF 205
PERFORMANCE SCORE

86.7% ACCURACY

100.0% COMPLETION

93rd
National Percentile

54th
Gold Bracket Percentile

Averages
National: 114.0
Gold Bracket: 176.5

National: 75.4%
Gold Bracket: 92.5%

National: 73.2%
Gold Bracket: 92.6%

Cracking 1 (Easy)	70 POINTS OUT OF 70	71.4% ACCURACY	COMPLETION: 100.0%
Cracking 2 (Medium)	60 POINTS OUT OF 60	100.0% ACCURACY	COMPLETION: 100.0%
Cracking 3 (Hard)	75 POINTS OUT OF 75	100.0% ACCURACY	COMPLETION: 100.0%