NCL Spring 2021 Team Game Scouting Report

Dear DORIS RUSH-LOPEZ (Team "BYU-Idaho Cyber Security Association"),

Congratulations on a great NCL 2021 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. If you have any questions regarding the information in this report please inquire at info@nationalcyberleague.org.

NCL 2021 Spring Season

The NCL 2021 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. The games were designed around performance-based exam objectives of CompTIA certifications and the National Initiative for Cybersecurity Education (NICE) Cybersecurity Workforce Framework published by the National Institute of Standards and Technology (NIST).

The NCL 2021 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 - 629 players), Silver (the next 35% of all players nationally - 1456 players) or Bronze (the next 50% of all players nationally - 2094 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 together. At the beginning of the NCL 2021 Spring Season, 6380 students/players and 425 faculty/coaches from more than 520 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 March 26 through March 28. The Team Game CTF event took place from April 9 through April 11. The games were conducted in real-time for students across the country.

The NCL 2021 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/TDQQC8HNK7P2

CompTIA

Based on the the performance detailed in this Scouting Report, DORIS RUSH-LOPEZ has earned **7 hours** of Continuing Education Units (CEUs) as approved by CompTIA. You can learn more about the NCL - CompTIA alignment via nationalcyberleague.org/comptia

Thank you for your participation in the NCL 2021 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

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NCL Scouting Report

What follows is a customized NCL Scouting Report of your performance in the NCL 2021 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 & Exploitation
   Identify actionable exploits and vulnerabilities and use them to bypass the security measures in code and compiled binaries.
3. Forensics
   Utilize the proper tools and techniques to analyze, process, recover, and/or investigate digital evidence in a computer-related incident.
4. 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.
5. Network Traffic Analysis
   Identify malicious and benign network traffic to demonstrate an understanding of potential security breaches.
6. 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.
7. Password Cracking
   Identify types of password hashes and apply various techniques to efficiently determine plaintext passwords.
8. Scanning & Reconnaissance
   Identify and use the proper tools to gain intelligence about a target including its services and potential vulnerabilities.
9. Web Application Exploitation
   Identify actionable exploits and vulnerabilities and use them to bypass the security measures in online services.

Based on the performance of the top ranking member in the Individual Game, DORIS RUSH-LOPEZ's team "**BYU-Idaho Cyber Security Association**" was placed into the **Silver Bracket** for the Team Game.

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NCL Spring 2021 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.

210 TH PLACE OUT OF 922
NATIONAL RANK

99 TH PLACE OUT OF 266
SILVER BRACKET RANK

1725 POINTS OUT OF 2965
PERFORMANCE SCORE

52.6% ACCURACY

66.9% COMPLETION

78th
National Percentile

63rd
Silver Bracket Percentile

Averages
National: 985.5
Silver Bracket: 1489.2

National: 49.7%
Silver Bracket: 65.8%

National: 38.6%
Silver Bracket: 58.5%

Cryptography	245 POINTS OUT OF 320	77.8% ACCURACY	COMPLETION: 82.4%
Enumeration & Exploitation	45 POINTS OUT OF 330	30.8% ACCURACY	COMPLETION: 28.6%
Forensics	200 POINTS OUT OF 330	66.7% ACCURACY	COMPLETION: 42.9%
Log Analysis	330 POINTS OUT OF 330	33.3% ACCURACY	COMPLETION: 100.0%
Network Traffic Analysis	150 POINTS OUT OF 340	50.0% ACCURACY	COMPLETION: 68.2%
Open Source Intelligence	325 POINTS OUT OF 325	89.7% ACCURACY	COMPLETION: 100.0%
Password Cracking	210 POINTS OUT OF 300	100.0% ACCURACY	COMPLETION: 86.4%
Scanning & Reconnaissance	80 POINTS OUT OF 305	50.0% ACCURACY	COMPLETION: 18.2%
Web Application Exploitation	40 POINTS OUT OF 285	12.0% ACCURACY	COMPLETION: 30.0%

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.

223 RD PLACE OUT OF 922
NATIONAL RANK

111 TH PLACE OUT OF 266
SILVER BRACKET RANK

245 POINTS OUT OF 320
PERFORMANCE SCORE

77.8%
ACCURACY

82.4%
COMPLETION

76th
National Percentile

59th
Silver Bracket Percentile

Averages
National: 131.1
Silver Bracket: 205.4

National: 52.6%
Silver Bracket: 73.3%

National: 44.7%
Silver Bracket: 69.5%

Decoding 1 (Easy)	25 POINTS OUT OF 25	100.0% ACCURACY	COMPLETION: 100.0%
Decoding 2 (Easy)	25 POINTS OUT OF 25	100.0% ACCURACY	COMPLETION: 100.0%
Decoding 3 (Medium)	25 POINTS OUT OF 25	100.0% ACCURACY	COMPLETION: 100.0%
Decoding 4 (Medium)	25 POINTS OUT OF 25	100.0% ACCURACY	COMPLETION: 100.0%
Decoding 5 (Hard)	40 POINTS OUT OF 40	50.0% ACCURACY	COMPLETION: 100.0%
RSA (Hard)	55 POINTS OUT OF 55	100.0% ACCURACY	COMPLETION: 100.0%
Steg (Easy)	20 POINTS OUT OF 20	100.0% ACCURACY	COMPLETION: 100.0%
Two Faced (Medium)	20 POINTS OUT OF 45	50.0% ACCURACY	COMPLETION: 66.7%
Wav Stego (Hard)	10 POINTS OUT OF 60	50.0% ACCURACY	COMPLETION: 33.3%

Enumeration & Exploitation Module

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

254 TH PLACE OUT OF 922
NATIONAL RANK

115 TH PLACE OUT OF 266
SILVER BRACKET RANK

45 POINTS OUT OF 330
PERFORMANCE SCORE

30.8% ACCURACY
National: 32.9%
Silver Bracket: 48.7%

28.6% COMPLETION
National: 18.0%
Silver Bracket: 24.4%

73rd
National Percentile

57th
Silver Bracket Percentile

Averages
National: 49.8
Silver Bracket: 65.4

Source (Easy)	10 POINTS OUT OF 100	50.0% ACCURACY	COMPLETION: 50.0%
Mobile (Medium)	10 POINTS OUT OF 100	33.3% ACCURACY	COMPLETION: 16.7%
Word (Hard)	25 POINTS OUT OF 130	25.0% ACCURACY	COMPLETION: 33.3%

Forensics Module

Utilize the proper tools and techniques to analyze, process, recover, and/or investigate digital evidence in a computer-related incident.

206 TH PLACE OUT OF 922
NATIONAL RANK

90 TH PLACE OUT OF 266
SILVER BRACKET RANK

200 POINTS OUT OF 330
PERFORMANCE SCORE

66.7% ACCURACY
National: 34.0%
Silver Bracket: 49.8%

42.9% COMPLETION
National: 31.0%
Silver Bracket: 47.4%

78th
National Percentile

67th
Silver Bracket Percentile

Averages
National: 103.6
Silver Bracket: 157.2

PDF (Easy)	100 POINTS OUT OF 100	80.0% ACCURACY	COMPLETION: 100.0%
Magic Bytes (Medium)	100 POINTS OUT OF 100	66.7% ACCURACY	COMPLETION: 100.0%
Deleted Flag (Hard)	0 POINTS OUT OF 130	0.0% ACCURACY	COMPLETION: 0.0%

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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.

144 TH PLACE OUT OF 922
NATIONAL RANK

56 TH PLACE OUT OF 266
SILVER BRACKET RANK

330 POINTS OUT OF 330
PERFORMANCE SCORE

33.3% ACCURACY

100.0% COMPLETION

85th
National Percentile

79th
Silver Bracket Percentile

Averages
National: 121.8
Silver Bracket: 200.2

National: 40.6%
Silver Bracket: 58.6%

National: 39.6%
Silver Bracket: 63.7%

Access (Easy)	100 POINTS OUT OF 100	70.0% ACCURACY	COMPLETION: 100.0%
Tasty (Medium)	110 POINTS OUT OF 110	17.0% ACCURACY	COMPLETION: 100.0%
Firewall (Hard)	120 POINTS OUT OF 120	100.0% ACCURACY	COMPLETION: 100.0%

Network Traffic Analysis Module

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

249 TH PLACE OUT OF 922
NATIONAL RANK

125 TH PLACE OUT OF 266
SILVER BRACKET RANK

150 POINTS OUT OF 340
PERFORMANCE SCORE

50.0% ACCURACY

68.2% COMPLETION

73rd
National Percentile

54th
Silver Bracket Percentile

Averages
National: 94.6
Silver Bracket: 148.0

National: 34.4%
Silver Bracket: 52.6%

National: 36.0%
Silver Bracket: 57.8%

NetBios (Easy)	50 POINTS OUT OF 50	70.0% ACCURACY	COMPLETION: 100.0%
Cracking (Medium)	70 POINTS OUT OF 70	80.0% ACCURACY	COMPLETION: 100.0%
Stolen IP (Medium)	30 POINTS OUT OF 110	26.7% ACCURACY	COMPLETION: 50.0%
USB Keyboard (Hard)	0 POINTS OUT OF 110	0.0% ACCURACY	COMPLETION: 0.0%

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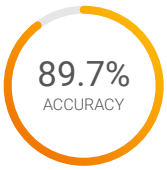
Open Source Intelligence Module

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

140 TH PLACE OUT OF 922
NATIONAL RANK

59 TH PLACE OUT OF 266
SILVER BRACKET RANK

325 POINTS OUT OF 325
PERFORMANCE SCORE



85th
National Percentile

78th
Silver Bracket Percentile

Averages
National: 211.3
Silver Bracket: 289.3

National: 57.2%
Silver Bracket: 77.7%

National: 67.4%
Silver Bracket: 90.2%

Rules of Conduct (Easy)	25 POINTS OUT OF 25	100.0% ACCURACY	COMPLETION: 100.0%
Time Machine (Easy)	45 POINTS OUT OF 45	50.0% ACCURACY	COMPLETION: 100.0%
Sunday Drive (Easy)	60 POINTS OUT OF 60	100.0% ACCURACY	COMPLETION: 100.0%
SHIELD (Medium)	60 POINTS OUT OF 60	100.0% ACCURACY	COMPLETION: 100.0%
Hardware ID (Medium)	60 POINTS OUT OF 60	100.0% ACCURACY	COMPLETION: 100.0%
Satellite Imagery (Hard)	75 POINTS OUT OF 75	100.0% ACCURACY	COMPLETION: 100.0%

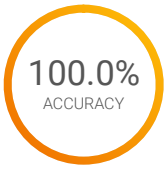
Password Cracking Module

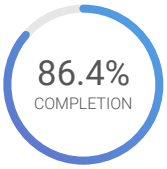
Identify types of password hashes and apply various techniques to efficiently determine plaintext passwords.

172 ND PLACE OUT OF 922
NATIONAL RANK

78 TH PLACE OUT OF 266
SILVER BRACKET RANK

210 POINTS OUT OF 300
PERFORMANCE SCORE





82nd
National Percentile

71 st
Silver Bracket Percentile

Averages
National: 95.7
Silver Bracket: 157.5

National: 62.0%
Silver Bracket: 85.9%

National: 39.7%
Silver Bracket: 64.3%

Hashing (Easy)	15 POINTS OUT OF 15	100.0% ACCURACY	COMPLETION: 100.0%
Cracking 1 (Easy)	30 POINTS OUT OF 30	100.0% ACCURACY	COMPLETION: 100.0%
Cracking 2 (Easy)	30 POINTS OUT OF 30	100.0% ACCURACY	COMPLETION: 100.0%
Cracking 3 (Medium)	45 POINTS OUT OF 45	100.0% ACCURACY	COMPLETION: 100.0%
Cracking 4 (Hard)	60 POINTS OUT OF 90	100.0% ACCURACY	COMPLETION: 80.0%
Cracking 5 (Hard)	30 POINTS OUT OF 90	100.0% ACCURACY	COMPLETION: 60.0%

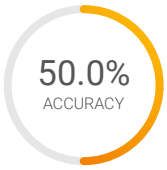
Scanning & Reconnaissance Module

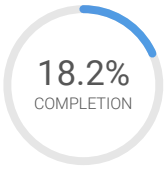
Identify and use the proper tools to gain intelligence about a target including its services and potential vulnerabilities.

336 TH PLACE OUT OF 922
NATIONAL RANK

172 ND PLACE OUT OF 266
SILVER BRACKET RANK

80 POINTS OUT OF 305
PERFORMANCE SCORE





64th
National Percentile

36th
Silver Bracket Percentile

Averages
National: 78.4
Silver Bracket: 125.3

National: 29.9%
Silver Bracket: 48.9%

National: 27.4%
Silver Bracket: 44.7%

UDP (Easy)	80 POINTS OUT OF 100	50.0% ACCURACY	COMPLETION: 80.0%
Blog (Medium)	0 POINTS OUT OF 100	0.0% ACCURACY	COMPLETION: 0.0%
Scanned (Hard)	0 POINTS OUT OF 105	0.0% ACCURACY	COMPLETION: 0.0%

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Web Application Exploitation Module

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

255 TH PLACE OUT OF 922
NATIONAL RANK

125 TH PLACE OUT OF 266
SILVER BRACKET RANK

40 POINTS OUT OF 285
PERFORMANCE SCORE

12.0% ACCURACY

30.0% COMPLETION

73rd
National Percentile

54th
Silver Bracket Percentile

Averages
National: 35.9
Silver Bracket: 51.4

National: 32.6%
Silver Bracket: 53.2%

National: 16.8%
Silver Bracket: 25.8%

Clicker (Easy)	20 POINTS OUT OF 100	100.0% ACCURACY	COMPLETION: 33.3%
Construction (Medium)	10 POINTS OUT OF 105	4.5% ACCURACY	COMPLETION: 25.0%
Hire-a-Hacker (Hard)	10 POINTS OUT OF 80	50.0% ACCURACY	COMPLETION: 33.3%