



NCL Fall 2020 Team Game Scouting Report

Dear Shawn Duong (Team "IrisSec"),

Congratulations on a great NCL 2020 Fall 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 Fall Season

The NCL 2020 Fall 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 Fall 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 - 680 players), Silver (the next 35% of all players nationally - 1601 players) or Bronze (the next 50% of all players nationally - 2284 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 Fall Season, 6610 students/players and 443 faculty/coaches from more than 530 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 October 23 through October 25. The Team Game CTF event took place from November 6 through November 8. The games were conducted in real-time for students across the country.

The NCL 2020 Fall 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/QNT2LTQ4GL1C

Thank you for your participation in the NCL 2020 Fall 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





NCL Scouting Report

What follows is a customized NCL Scouting Report of your performance in the NCL 2020 Fall 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**
Information is key, but it's not going to be easy to get it. Decipher these hidden messages to learn what is really going on.
2. **Enumeration and Exploitation**
Hacking isn't just for the malicious actors, all cybersecurity professionals need to know it. Try to break some training programs and some of the hackers' software. You might even be able to secure your own programs.
3. **Forensics**
Do you know where to look for the evidence? Help find the forensic trail that malicious actors leave behind.
4. **Log Analysis**
Logs hold a ton of information. The hard part is using them to learn what happened. Analyze these logs to determine what the hackers have been up to.
5. **Network Traffic Analysis**
Determine what happened and exactly when it happened by looking at network traffic captures.
6. **Open Source Intelligence**
Obtain information using publicly available data and tools.
7. **Password Cracking**
Try your hand at cracking these passwords.
8. **Scanning & Reconnaissance**
Before you catch the hackers, you need to find them. Put your tracking skills to the test and find out what the hackers are up to.
9. **Web Application Exploitation**
Find and demonstrate vulnerabilities in various city systems.

Based on the performance of the top ranking member in the Individual Game, Shawn Duong's team "IrisSec" was placed into the **Gold Bracket** for the Team Game.





NCL Fall 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.

1ST PLACE OUT OF 957 NATIONAL RANK	1ST PLACE OUT OF 121 GOLD BRACKET RANK	3000 POINTS OUT OF 3050 PERFORMANCE SCORE	88.7% ACCURACY	98.9% COMPLETION
100th National Percentile	100th Gold Bracket Percentile	Averages National: 1146.1 Gold Bracket: 2096.9	National: 58.5% Gold Bracket: 75.1%	National: 42.9% Gold Bracket: 74.7%
Cryptography	355 POINTS OUT OF 355	78.6% ACCURACY	COMPLETION:	100.0%
Enumeration and Exploitation	305 POINTS OUT OF 305	88.2% ACCURACY	COMPLETION:	100.0%
Forensics	310 POINTS OUT OF 310	100.0% ACCURACY	COMPLETION:	100.0%
Log Analysis	350 POINTS OUT OF 350	88.6% ACCURACY	COMPLETION:	100.0%
Network Traffic Analysis	390 POINTS OUT OF 390	80.6% ACCURACY	COMPLETION:	100.0%
Open Source Intelligence	345 POINTS OUT OF 345	95.0% ACCURACY	COMPLETION:	100.0%
Password Cracking	300 POINTS OUT OF 350	95.5% ACCURACY	COMPLETION:	91.3%
Scanning & Reconnaissance	245 POINTS OUT OF 245	95.0% ACCURACY	COMPLETION:	100.0%
Web Application Exploitation	300 POINTS OUT OF 300	78.6% ACCURACY	COMPLETION:	100.0%

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





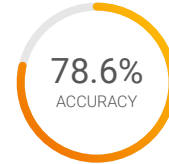
Cryptography Module

Information is key, but it's not going to be easy to get it. Decipher these hidden messages to learn what is really going on.

6TH PLACE
OUT OF 957
NATIONAL RANK

6TH PLACE
OUT OF 121
GOLD BRACKET RANK

355 POINTS
OUT OF 355
PERFORMANCE SCORE



100th
National Percentile

96th
Gold Bracket Percentile

Averages
National: 173.9
Gold Bracket: 264.5

National: 79.1%
Gold Bracket: 83.2%

National: 61.9%
Gold Bracket: 83.7%

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)	40 POINTS OUT OF 40	100.0% ACCURACY	COMPLETION:	100.0%
Decoding 5 (Hard)	65 POINTS OUT OF 65	100.0% ACCURACY	COMPLETION:	100.0%
Steg 1 (Easy)	50 POINTS OUT OF 50	100.0% ACCURACY	COMPLETION:	100.0%
Steg 2 (Medium)	75 POINTS OUT OF 75	100.0% ACCURACY	COMPLETION:	100.0%
Spooky (Hard)	50 POINTS OUT OF 50	25.0% ACCURACY	COMPLETION:	100.0%





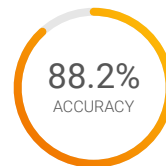
Enumeration and Exploitation Module

Hacking isn't just for the malicious actors, all cybersecurity professionals need to know it. Try to break some training programs and some of the hackers' software. You might even be able to secure your own programs.

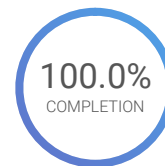
4TH PLACE
OUT OF 957
NATIONAL RANK

4TH PLACE
OUT OF 121
GOLD BRACKET RANK

305 POINTS
OUT OF 305
PERFORMANCE SCORE



National: 40.7%
Gold Bracket: 64.5%



National: 24.7%
Gold Bracket: 53.5%

100th
National Percentile

97th
Gold Bracket Percentile

Averages
National: 74.5
Gold Bracket: 161.8

Bank of Math (Easy)

70 POINTS
OUT OF 70

100.0%
ACCURACY

COMPLETION: **100.0%**

Ghost (Medium)

105 POINTS
OUT OF 105

100.0%
ACCURACY

COMPLETION: **100.0%**

Crabapples (Hard)

130 POINTS
OUT OF 130

81.8%
ACCURACY

COMPLETION: **100.0%**

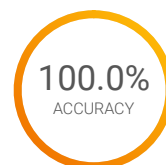
Forensics Module

Do you know where to look for the evidence? Help find the forensic trail that malicious actors leave behind.

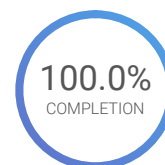
1ST PLACE
OUT OF 957
NATIONAL RANK

1ST PLACE
OUT OF 121
GOLD BRACKET RANK

310 POINTS
OUT OF 310
PERFORMANCE SCORE



National: 63.0%
Gold Bracket: 80.5%



National: 47.6%
Gold Bracket: 78.0%

100th
National Percentile

100th
Gold Bracket Percentile

Averages
National: 152.2
Gold Bracket: 246.3

Travel Photos (Easy)

70 POINTS
OUT OF 70

100.0%
ACCURACY

COMPLETION: **100.0%**

Fire (Medium)

70 POINTS
OUT OF 70

100.0%
ACCURACY

COMPLETION: **100.0%**

Spin (Medium)

70 POINTS
OUT OF 70

100.0%
ACCURACY

COMPLETION: **100.0%**

Infected Memory (Hard)

100 POINTS
OUT OF 100

100.0%
ACCURACY

COMPLETION: **100.0%**





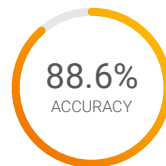
Log Analysis Module

Logs hold a ton of information. The hard part is using them to learn what happened. Analyze these logs to determine what the hackers have been up to.

34TH PLACE
OUT OF 957
NATIONAL RANK

29TH PLACE
OUT OF 121
GOLD BRACKET RANK

350 POINTS
OUT OF 350
PERFORMANCE SCORE



National: 58.4%
Gold Bracket: 81.2%



National: 62.3%
Gold Bracket: 87.3%

97th
National Percentile

77th
Gold Bracket Percentile

Averages
National: 205.6
Gold Bracket: 298.6

Webapp (Easy)

110 POINTS
OUT OF 110

88.9%
ACCURACY

COMPLETION: **100.0%**

Blocks (Medium)

110 POINTS
OUT OF 110

100.0%
ACCURACY

COMPLETION: **100.0%**

Videoconference (Hard)

130 POINTS
OUT OF 130

80.0%
ACCURACY

COMPLETION: **100.0%**

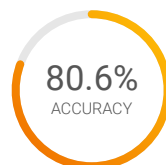
Network Traffic Analysis Module

Determine what happened and exactly when it happened by looking at network traffic captures.

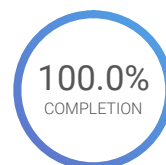
4TH PLACE
OUT OF 957
NATIONAL RANK

4TH PLACE
OUT OF 121
GOLD BRACKET RANK

390 POINTS
OUT OF 390
PERFORMANCE SCORE



National: 47.0%
Gold Bracket: 67.5%



National: 43.5%
Gold Bracket: 75.6%

100th
National Percentile

97th
Gold Bracket Percentile

Averages
National: 154.8
Gold Bracket: 286.8

Trojan (Easy)

100 POINTS
OUT OF 100

75.0%
ACCURACY

COMPLETION: **100.0%**

Cracking (Medium)

70 POINTS
OUT OF 70

100.0%
ACCURACY

COMPLETION: **100.0%**

Sick Beats (Medium)

100 POINTS
OUT OF 100

100.0%
ACCURACY

COMPLETION: **100.0%**

USB (Hard)

120 POINTS
OUT OF 120

71.4%
ACCURACY

COMPLETION: **100.0%**





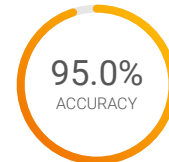
Open Source Intelligence Module

Obtain information using publicly available data and tools.

4TH PLACE
OUT OF 957
NATIONAL RANK

4TH PLACE
OUT OF 121
GOLD BRACKET RANK

345 POINTS
OUT OF 345
PERFORMANCE SCORE



National: 63.7%
Gold Bracket: 73.2%



National: 74.8%
Gold Bracket: 86.5%

100th
National Percentile

97th
Gold Bracket Percentile

Averages
National: 186.6
Gold Bracket: 261.9

Rules of Conduct (Easy)	25 POINTS OUT OF 25	100.0% ACCURACY	COMPLETION:	100.0%
Policy (Easy)	50 POINTS OUT OF 50	100.0% ACCURACY	COMPLETION:	100.0%
Institutional (Medium)	50 POINTS OUT OF 50	66.7% ACCURACY	COMPLETION:	100.0%
Flight (Hard)	120 POINTS OUT OF 120	100.0% ACCURACY	COMPLETION:	100.0%
Route (Hard)	100 POINTS OUT OF 100	100.0% ACCURACY	COMPLETION:	100.0%





Password Cracking Module

Try your hand at cracking these passwords.

52ND PLACE
OUT OF 957
NATIONAL RANK

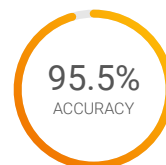
95th
National Percentile

40TH PLACE
OUT OF 121
GOLD BRACKET RANK

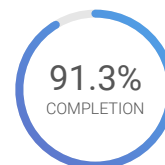
67th
Gold Bracket Percentile

300 POINTS
OUT OF 350
PERFORMANCE SCORE

Averages
National: 159.4
Gold Bracket: 263.3



National: 86.2%
Gold Bracket: 95.2%



National: 51.9%
Gold Bracket: 82.0%

Cracking 1 (Easy)	30 POINTS OUT OF 30	100.0% ACCURACY	COMPLETION:	100.0%
Cracking 2 (Easy)	45 POINTS OUT OF 45	100.0% ACCURACY	COMPLETION:	100.0%
Cracking 3 (Medium)	65 POINTS OUT OF 65	100.0% ACCURACY	COMPLETION:	100.0%
Cracking 4 (Medium)	45 POINTS OUT OF 45	75.0% ACCURACY	COMPLETION:	100.0%
Cracking 5 (Hard)	65 POINTS OUT OF 115	100.0% ACCURACY	COMPLETION:	71.4%
Zip (Medium)	50 POINTS OUT OF 50	100.0% ACCURACY	COMPLETION:	100.0%

Scanning & Reconnaissance Module

Before you catch the hackers, you need to find them. Put your tracking skills to the test and find out what the hackers are up to.

20TH PLACE
OUT OF 957
NATIONAL RANK

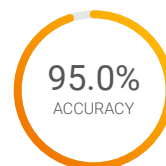
98th
National Percentile

17TH PLACE
OUT OF 121
GOLD BRACKET RANK

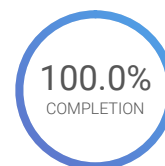
86th
Gold Bracket Percentile

245 POINTS
OUT OF 245
PERFORMANCE SCORE

Averages
National: 93.2
Gold Bracket: 186.8



National: 62.4%
Gold Bracket: 88.5%



National: 45.7%
Gold Bracket: 81.6%

Ports (Easy)	70 POINTS OUT OF 70	100.0% ACCURACY	COMPLETION:	100.0%
Fileshare (Medium)	75 POINTS OUT OF 75	100.0% ACCURACY	COMPLETION:	100.0%
Harbour (Hard)	100 POINTS OUT OF 100	87.5% ACCURACY	COMPLETION:	100.0%





Web Application Exploitation Module

Find and demonstrate vulnerabilities in various city systems.

1 ST PLACE
OUT OF 957
NATIONAL RANK

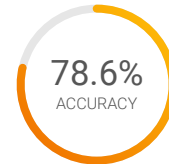
1 ST PLACE
OUT OF 121
GOLD BRACKET RANK

300 POINTS
OUT OF 300
PERFORMANCE SCORE

100th
National Percentile

100th
Gold Bracket Percentile

Averages
National: 54.4
Gold Bracket: 108.2



National: 33.9%
Gold Bracket: 50.4%



National: 25.4%
Gold Bracket: 48.8%

Nuclear Gift Shop (Easy)

90 POINTS
OUT OF 90

100.0%
ACCURACY

COMPLETION: **100.0%**

Dice's Revenge (Medium)

100 POINTS
OUT OF 100

66.7%
ACCURACY

COMPLETION: **100.0%**

Catstagram v3 (Hard)

110 POINTS
OUT OF 110

71.4%
ACCURACY

COMPLETION: **100.0%**

