NCL Fall 2020 Team Game Scouting Report

Dear Raul Reyes (Team "CSU-Pueblo Red Team"),

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/XT2KFT15RYC9

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, Raul Reyes's team "**CSU-Pueblo Red Team**" was placed into the **Silver Bracket** for the Team Game.

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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.

13 TH PLACE OUT OF **957**
NATIONAL RANK

99th
National Percentile

1 ST PLACE OUT OF **281**
SILVER BRACKET RANK

100th
Silver Bracket Percentile

2740 POINTS OUT OF **3050**
PERFORMANCE SCORE
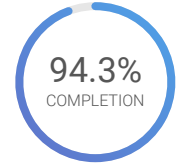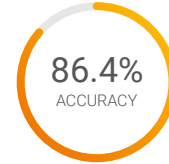
Averages
National: 1146.1
Silver Bracket: 1407.2

86.4%
ACCURACY

National: 58.5%
Silver Bracket: 59.1%

94.3%
COMPLETION

National: 42.9%
Silver Bracket: 52.6%

| Cryptography | **305** POINTS OUT OF 355 | **90.9%** ACCURACY | COMPLETION: | **90.9%** |

| Enumeration and Exploitation | **305** POINTS OUT OF 305 | **75.0%** ACCURACY | COMPLETION: | **100.0%** |

| Forensics | **310** POINTS OUT OF 310 | **84.2%** ACCURACY | COMPLETION: | **100.0%** |

| Log Analysis | **350** POINTS OUT OF 350 | **91.2%** ACCURACY | COMPLETION: | **100.0%** |

| Network Traffic Analysis | **340** POINTS OUT OF 390 | **75.8%** ACCURACY | COMPLETION: | **86.2%** |

| Open Source Intelligence | **345** POINTS OUT OF 345 | **90.5%** ACCURACY | COMPLETION: | **100.0%** |

| Password Cracking | **300** POINTS OUT OF 350 | **100.0%** ACCURACY | COMPLETION: | **91.3%** |

| Scanning & Reconnaissance | **245** POINTS OUT OF 245 | **95.0%** ACCURACY | COMPLETION: | **100.0%** |

| Web Application Exploitation | **140** POINTS OUT OF 300 | **72.7%** ACCURACY | COMPLETION: | **72.7%** |

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

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Raul Reyes
ry.reyes@pack.csupueblo.edu
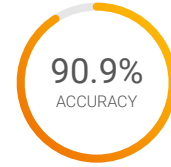
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Cryptography Module

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.
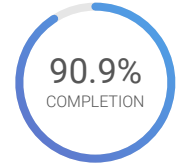
37 TH PLACE OUT OF 957
NATIONAL RANK

14 TH PLACE OUT OF 281
SILVER BRACKET RANK

305 POINTS OUT OF 355
PERFORMANCE SCORE

90.9% ACCURACY

90.9% COMPLETION

97th
National Percentile

96th
Silver Bracket Percentile

Averages
National: 173.9
Silver Bracket: 201.5

National: 79.1%
Silver Bracket: 81.5%

National: 61.9%
Silver Bracket: 69.9%

	Points	Accuracy	Completion
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	66.7% ACCURACY	COMPLETION: 100.0%
Steg 2 (Medium)	75 POINTS OUT OF 75	100.0% ACCURACY	COMPLETION: 100.0%
Spooky (Hard)	0 POINTS OUT OF 50	0.0% ACCURACY	COMPLETION: 0.0%

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Raul Reyes
ry.reyes@pack.csupueblo.edu

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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.

10 TH PLACE OUT OF **957**
NATIONAL RANK

1 ST PLACE OUT OF **281**
SILVER BRACKET RANK

305 POINTS OUT OF 305
PERFORMANCE SCORE

75.0% ACCURACY
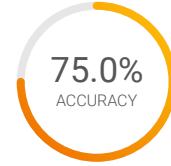
100.0% COMPLETION

99th
National Percentile

100th
Silver Bracket Percentile

Averages
National: 74.5
Silver Bracket: 74.5

National: 40.7%
Silver Bracket: 41.1%

National: 24.7%
Silver Bracket: 24.8%

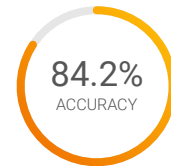|	Points	Accuracy	Completion
Bank of Math (Easy)	70 OUT OF 70	100.0%	100.0%
Ghost (Medium)	105 OUT OF 105	80.0%	100.0%
Crabapples (Hard)	130 OUT OF 130	69.2%	100.0%

Forensics Module

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

24 TH PLACE OUT OF **957**
NATIONAL RANK

4 TH PLACE OUT OF **281**
SILVER BRACKET RANK

310 POINTS OUT OF 310
PERFORMANCE SCORE

84.2% ACCURACY

100.0% COMPLETION

98th
National Percentile

99th
Silver Bracket Percentile

Averages
National: 152.2
Silver Bracket: 168.8

National: 63.0%
Silver Bracket: 66.4%

National: 47.6%
Silver Bracket: 52.1%

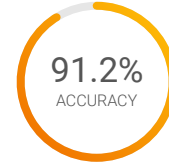|	Points	Accuracy	Completion
Travel Photos (Easy)	70 OUT OF 70	100.0%	100.0%
Fire (Medium)	70 OUT OF 70	100.0%	100.0%
Spin (Medium)	70 OUT OF 70	100.0%	100.0%
Infected Memory (Hard)	100 OUT OF 100	70.0%	100.0%

Raul Reyes
ry.reyes@pack.csupueblo.edu

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.

27TH PLACE OUT OF **957**
NATIONAL RANK

4TH PLACE OUT OF **281**
SILVER BRACKET RANK

350 POINTS OUT OF 350
PERFORMANCE SCORE

91.2% ACCURACY

100.0% COMPLETION

98th
National Percentile

99th
Silver Bracket Percentile

Averages
National: 205.6
Silver Bracket: 234.2

National: 58.4%
Silver Bracket: 60.2%

National: 62.3%
Silver Bracket: 71.0%

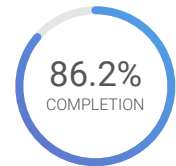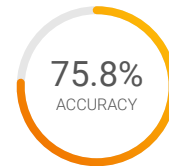|	Points	Accuracy	Completion
Webapp (Easy)	110 OUT OF 110	100.0%	100.0%
Blocks (Medium)	110 OUT OF 110	100.0%	100.0%
Videoconference (Hard)	130 OUT OF 130	80.0%	100.0%

Network Traffic Analysis Module

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

50TH PLACE OUT OF **957**
NATIONAL RANK

9TH PLACE OUT OF **281**
SILVER BRACKET RANK

340 POINTS OUT OF 390
PERFORMANCE SCORE

75.8% ACCURACY

86.2% COMPLETION

95th
National Percentile

97th
Silver Bracket Percentile

Averages
National: 154.8
Silver Bracket: 174.6

National: 47.0%
Silver Bracket: 45.7%

National: 43.5%
Silver Bracket: 49.0%

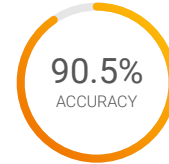|	Points	Accuracy	Completion
Trojan (Easy)	100 OUT OF 100	90.0%	100.0%
Cracking (Medium)	70 OUT OF 70	100.0%	100.0%
Sick Beats (Medium)	100 OUT OF 100	100.0%	100.0%
USB (Hard)	70 OUT OF 120	46.2%	60.0%

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Open Source Intelligence Module

Obtain information using publicly available data and tools.

14 TH PLACE
OUT OF 957
NATIONAL RANK

3 RD PLACE
OUT OF 281
SILVER BRACKET RANK

345 POINTS
OUT OF 345
PERFORMANCE SCORE

90.5% ACCURACY

100.0% COMPLETION

99th
National Percentile

99th
Silver Bracket Percentile

Averages
National: 186.6
Silver Bracket: 206.1

National: 63.7%
Silver Bracket: 63.1%

National: 74.8%
Silver Bracket: 78.2%

	Points	Accuracy	Completion
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	100.0% ACCURACY	COMPLETION: 100.0%
Flight (Hard)	120 POINTS OUT OF 120	75.0% ACCURACY	COMPLETION: 100.0%
Route (Hard)	100 POINTS OUT OF 100	100.0% ACCURACY	COMPLETION: 100.0%

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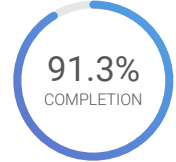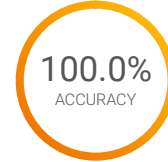CYBER SKYLINE

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Password Cracking Module

Try your hand at cracking these passwords.

34 TH PLACE
OUT OF **957**
NATIONAL RANK

7 TH PLACE
OUT OF **281**
SILVER BRACKET RANK

300 POINTS
OUT OF 350
PERFORMANCE SCORE

100.0% ACCURACY

91.3% COMPLETION

97th
National Percentile

98th
Silver Bracket Percentile

Averages
National: 159.4
Silver Bracket: 190.2

National: 86.2%
Silver Bracket: 86.5%

National: 51.9%
Silver Bracket: 61.6%

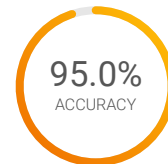|	Points	Accuracy	Completion
Cracking 1 (Easy)	30 POINTS OUT OF 30	100.0% ACCURACY	COMPLETION: 100.0%
Cracking 2 (Easy)	45 POINTS OUT OF 45	100.0% ACCURACY	COMPLETION: 100.0%
Cracking 3 (Medium)	65 POINTS OUT OF 65	100.0% ACCURACY	COMPLETION: 100.0%
Cracking 4 (Medium)	45 POINTS OUT OF 45	100.0% ACCURACY	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.

28 TH PLACE
OUT OF **957**
NATIONAL RANK

5 TH PLACE
OUT OF **281**
SILVER BRACKET RANK

245 POINTS
OUT OF 245
PERFORMANCE SCORE

95.0% ACCURACY

100.0% COMPLETION

98th
National Percentile

99th
Silver Bracket Percentile

Averages
National: 93.2
Silver Bracket: 95.0

National: 62.4%
Silver Bracket: 65.9%

National: 45.7%
Silver Bracket: 48.2%

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

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Raul Reyes
ry.reyes@pack.csupueblo.edu

Web Application Exploitation Module

Find and demonstrate vulnerabilities in various city systems.

13 TH PLACE OUT OF **957**
NATIONAL RANK

2 ND PLACE OUT OF **281**
SILVER BRACKET RANK

140 POINTS OUT OF 300
PERFORMANCE SCORE

72.7% ACCURACY
National: 33.9%
Silver Bracket: 34.4%

72.7% COMPLETION
National: 25.4%
Silver Bracket: 25.8%
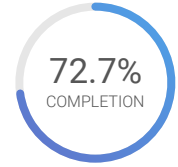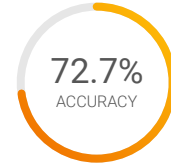
99 th
National Percentile

100 th
Silver Bracket Percentile

Averages
National: 54.4
Silver Bracket: 54.3

Nuclear Gift Shop (Easy)	**90** POINTS OUT OF 90	100.0% ACCURACY	COMPLETION:	100.0%	
Dice's Revenge (Medium)	**10** POINTS OUT OF 100	100.0% ACCURACY	COMPLETION:	50.0%	
Catstagram v3 (Hard)	**40** POINTS OUT OF 110	50.0% ACCURACY	COMPLETION:	60.0%	