NCL Spring 2021 Individual Game Scouting Report

Dear Federico Cassano,

Congratulations on a great NCL 2021 Spring Individual 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/6NXJA4K1VPB9

Based on the the performance detailed in this Scouting Report, Federico Cassano has earned **16 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 Individual 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 2021 Spring Individual 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.

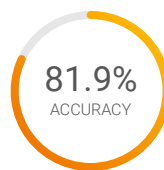## NCL Spring 2021 Preseason

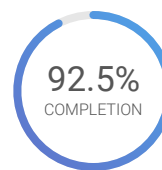**277** TH PLACE OUT OF **5794**
NATIONAL RANK

96th
National Percentile

1395 POINTS OUT OF 1785
PERFORMANCE SCORE

Averages
National: 615.1

81.9%
ACCURACY

National: 71.2%

92.5%
COMPLETION

National: 48.5%

Based on Preseason performance, **Federico Cassano** was placed into the **Gold Bracket** for the Individual Game.

NCL Spring 2021 Individual Game

The NCL Individual Game is designed for student players nationwide to compete in realtime in the categories listed below. The Individual Game evaluates the technical cybersecurity skills of the individual, without the assistance of others.

28 TH PLACE OUT OF **4180**
NATIONAL RANK

27 TH PLACE OUT OF **628**
GOLD BRACKET RANK

2475 POINTS OUT OF **3000**
PERFORMANCE SCORE

63.6% ACCURACY
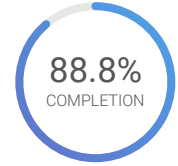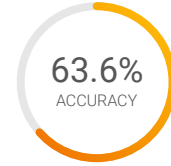
88.8% COMPLETION

100th
National Percentile

96th
Gold Bracket Percentile

Averages
National: 607.9
Gold Bracket: 1352.6

National: 66.1%
Gold Bracket: 70.5%

National: 26.3%
Gold Bracket: 54.4%

Category	Points	Accuracy	Completion
Cryptography	325 POINTS OUT OF 325	62.5% ACCURACY	100.0%
Enumeration & Exploitation	240 POINTS OUT OF 300	92.3% ACCURACY	85.7%
Forensics	290 POINTS OUT OF 310	42.1% ACCURACY	88.9%
Log Analysis	320 POINTS OUT OF 360	56.8% ACCURACY	92.6%
Network Traffic Analysis	230 POINTS OUT OF 365	72.7% ACCURACY	80.0%
Open Source Intelligence	300 POINTS OUT OF 300	80.0% ACCURACY	100.0%
Password Cracking	275 POINTS OUT OF 310	100.0% ACCURACY	95.7%
Scanning & Reconnaissance	210 POINTS OUT OF 300	36.4% ACCURACY	72.7%
Web Application Exploitation	185 POINTS OUT OF 330	57.1% ACCURACY	66.7%

Note: Survey module (100 points) was excluded from this report.
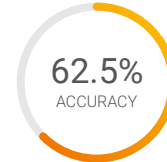
POWERED BY **CYBER SKYLINE**

Cryptography Module

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

17 TH PLACE OUT OF **4180**
NATIONAL RANK

17 TH PLACE OUT OF **628**
GOLD BRACKET RANK

325 POINTS OUT OF 325
PERFORMANCE SCORE

62.5% ACCURACY

100.0% COMPLETION

100th
National Percentile

98th
Gold Bracket Percentile

Averages
National: 122.0
Gold Bracket: 168.6

National: 80.8%
Gold Bracket: 87.1%

National: 48.1%
Gold Bracket: 61.9%

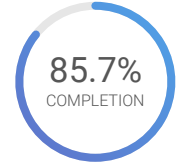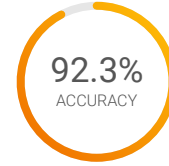| Challenge	Points	Accuracy	Completion
Decoding 1 (Easy)	30 POINTS OUT OF 30	100.0% ACCURACY	COMPLETION: 100.0%
Decoding 2 (Easy)	20 POINTS OUT OF 20	100.0% ACCURACY	COMPLETION: 100.0%
Decoding 3 (Easy)	20 POINTS OUT OF 20	100.0% ACCURACY	COMPLETION: 100.0%
Decoding 4 (Medium)	20 POINTS OUT OF 20	100.0% ACCURACY	COMPLETION: 100.0%
Decoding 5 (Hard)	30 POINTS OUT OF 30	100.0% ACCURACY	COMPLETION: 100.0%
Puzzle (Easy)	40 POINTS OUT OF 40	100.0% ACCURACY	COMPLETION: 100.0%
Hidden (Medium)	50 POINTS OUT OF 50	40.0% ACCURACY	COMPLETION: 100.0%
Bubba (Medium)	50 POINTS OUT OF 50	25.0% ACCURACY	COMPLETION: 100.0%
Unknown (Hard)	65 POINTS OUT OF 65	100.0% ACCURACY	COMPLETION: 100.0%

Enumeration & Exploitation Module

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

39 TH PLACE OUT OF **4180**
NATIONAL RANK

36 TH PLACE OUT OF **628**
GOLD BRACKET RANK

240 POINTS OUT OF 300
PERFORMANCE SCORE

92.3% ACCURACY

85.7% COMPLETION

100th
National Percentile

95th
Gold Bracket Percentile

Averages
National: 41.6
Gold Bracket: 96.8

National: 42.9%
Gold Bracket: 68.4%

National: 18.2%
Gold Bracket: 39.6%

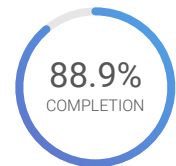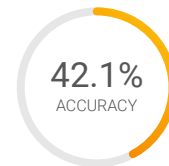|	Points	Accuracy	Completion
Open Up (Easy)	100 POINTS OUT OF 100	100.0% ACCURACY	COMPLETION: 100.0%
Popping Boxes (Medium)	100 POINTS OUT OF 100	80.0% ACCURACY	COMPLETION: 100.0%
Trash Compactor (Hard)	40 POINTS OUT OF 100	100.0% ACCURACY	COMPLETION: 50.0%

Forensics Module

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

83 RD PLACE OUT OF **4180**
NATIONAL RANK

77 TH PLACE OUT OF **628**
GOLD BRACKET RANK

290 POINTS OUT OF 310
PERFORMANCE SCORE

42.1% ACCURACY

88.9% COMPLETION

99th
National Percentile

88th
Gold Bracket Percentile

Averages
National: 72.6
Gold Bracket: 135.8

National: 39.5%
Gold Bracket: 49.4%

National: 22.7%
Gold Bracket: 40.3%

	Points	Accuracy	Completion
Excellent Tracking (Easy)	75 POINTS OUT OF 75	50.0% ACCURACY	COMPLETION: 100.0%
Image File (Medium)	100 POINTS OUT OF 100	57.1% ACCURACY	COMPLETION: 100.0%
Sessions (Hard)	115 POINTS OUT OF 135	34.8% ACCURACY	COMPLETION: 80.0%

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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.

92 ND PLACE
OUT OF **4180**
NATIONAL RANK

98th
National Percentile

85 TH PLACE
OUT OF **628**
GOLD BRACKET RANK

87th
Gold Bracket Percentile

320 POINTS
OUT OF 360
PERFORMANCE SCORE
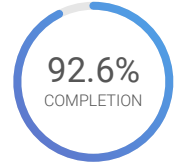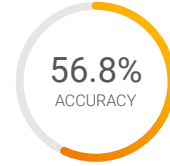
Averages
National: 93.6
Gold Bracket: 205.6

56.8%
ACCURACY

National: 57.5%
Gold Bracket: 59.6%

92.6%
COMPLETION

National: 29.3%
Gold Bracket: 60.5%

|				
AWS Route 53 (Easy)	100 POINTS OUT OF 100	38.9% ACCURACY	COMPLETION:	100.0%
Pacman (Medium)	110 POINTS OUT OF 110	81.8% ACCURACY	COMPLETION:	100.0%
Mobile (Hard)	110 POINTS OUT OF 150	60.0% ACCURACY	COMPLETION:	81.8%

Network Traffic Analysis Module

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

314 TH PLACE
OUT OF **4180**
NATIONAL RANK

93rd
National Percentile

233 RD PLACE
OUT OF **628**
GOLD BRACKET RANK

63rd
Gold Bracket Percentile

230 POINTS
OUT OF 365
PERFORMANCE SCORE
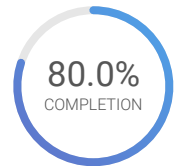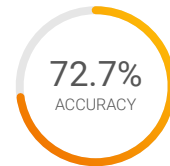
Averages
National: 95.0
Gold Bracket: 179.1

72.7%
ACCURACY

National: 57.9%
Gold Bracket: 70.0%

80.0%
COMPLETION

National: 36.0%
Gold Bracket: 63.1%

Checksum (Easy)	55 POINTS OUT OF 55	83.3% ACCURACY	COMPLETION:	100.0%
Cracking (Medium)	60 POINTS OUT OF 70	80.0% ACCURACY	COMPLETION:	80.0%
WPAD (Medium)	115 POINTS OUT OF 115	63.6% ACCURACY	COMPLETION:	100.0%
Encrypted (Hard)	0 POINTS OUT OF 125	0.0% ACCURACY	COMPLETION:	0.0%

The National Cyber League
Where Cybersecurity is a Passion
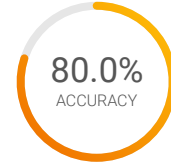
Federico Cassano
federico.cassano@federico.codes

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.

49TH PLACE
OUT OF **4180**
NATIONAL RANK

99th
National Percentile

44TH PLACE
OUT OF **628**
GOLD BRACKET RANK

93rd
Gold Bracket Percentile

300POINTS
OUT OF
300
PERFORMANCE SCORE

Averages
National: 115.4
Gold Bracket: 184.7

80.0%
ACCURACY

National: 73.4%
Gold Bracket: 73.6%

100.0%
COMPLETION

National: 53.7%
Gold Bracket: 73.0%

|				
Rules of Conduct (Easy)	**15** POINTS OUT OF 15	**100.0%** ACCURACY	COMPLETION:	100.0%
Breached Passwords (Easy)	**50** POINTS OUT OF 50	**100.0%** ACCURACY	COMPLETION:	100.0%
Database Lookup (Medium)	**65** POINTS OUT OF 65	**63.6%** ACCURACY	COMPLETION:	100.0%
Covered QR (Medium)	**70** POINTS OUT OF 70	**80.0%** ACCURACY	COMPLETION:	100.0%
Fake Profile (Hard)	**100** POINTS OUT OF 100	**100.0%** 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.

37 TH PLACE OUT OF **4180**
NATIONAL RANK

34 TH PLACE OUT OF **628**
GOLD BRACKET RANK

275 POINTS OUT OF 310
PERFORMANCE SCORE

100.0% ACCURACY
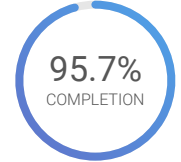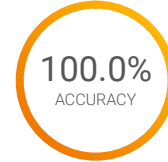
95.7% COMPLETION

100th
National Percentile

95th
Gold Bracket Percentile

Averages
National: 110.5
Gold Bracket: 205.6

National: 89.0%
Gold Bracket: 93.6%

National: 45.3%
Gold Bracket: 75.7%

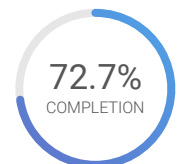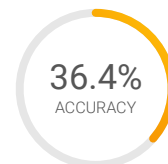|	Points	Accuracy		Completion
Hashing (Easy)	15 POINTS OUT OF 15	100.0% ACCURACY	COMPLETION:	100.0%
Cracking 1 (Easy)	30 POINTS OUT OF 30	100.0% ACCURACY	COMPLETION:	100.0%
Cracking 2 (Easy)	45 POINTS OUT OF 45	100.0% ACCURACY	COMPLETION:	100.0%
Cracking 3 (Medium)	45 POINTS OUT OF 45	100.0% ACCURACY	COMPLETION:	100.0%
Cracking 4 (Hard)	45 POINTS OUT OF 45	100.0% ACCURACY	COMPLETION:	100.0%
Cracking 5 (Hard)	65 POINTS OUT OF 100	100.0% ACCURACY	COMPLETION:	83.3%
Zip (Medium)	30 POINTS OUT OF 30	100.0% ACCURACY	COMPLETION:	100.0%

Scanning & Reconnaissance Module

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

45 TH PLACE OUT OF **4180**
NATIONAL RANK

40 TH PLACE OUT OF **628**
GOLD BRACKET RANK

210 POINTS OUT OF 300
PERFORMANCE SCORE

36.4% ACCURACY

72.7% COMPLETION

99th
National Percentile

94th
Gold Bracket Percentile

Averages
National: 50.6
Gold Bracket: 77.8

National: 66.8%
Gold Bracket: 76.2%

National: 24.4%
Gold Bracket: 35.7%

	Points	Accuracy		Completion
Hidden Treasure (Easy)	100 POINTS OUT OF 100	83.3% ACCURACY	COMPLETION:	100.0%
TeamSpeak (Medium)	100 POINTS OUT OF 100	100.0% ACCURACY	COMPLETION:	100.0%
Router (Hard)	10 POINTS OUT OF 100	7.1% ACCURACY	COMPLETION:	25.0%

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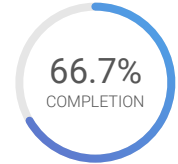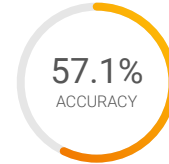
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Web Application Exploitation Module

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

94 TH PLACE OUT OF **4180**
NATIONAL RANK

79 TH PLACE OUT OF **628**
GOLD BRACKET RANK

185 POINTS OUT OF 330
PERFORMANCE SCORE

57.1% ACCURACY

66.7% COMPLETION

98th
National Percentile

88th
Gold Bracket Percentile

Averages
National: 54.2
Gold Bracket: 102.8

National: 60.3%
Gold Bracket: 73.7%

National: 26.6%
Gold Bracket: 43.5%

Doge Community (Easy)	90 POINTS OUT OF 100	100.0% ACCURACY	COMPLETION:	100.0%	
Infosec Blog (Medium)	95 POINTS OUT OF 110	55.6% ACCURACY	COMPLETION:	100.0%	
Hacker Login (Hard)	0 POINTS OUT OF 120	0.0% ACCURACY	COMPLETION:	0.0%	

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CYBER SKYLINE