2016 Webinar Series: NCL in the Classroom
Webinar Protocol

:: Mute your phone/mic when not talking
:: Use the chat feature in WebEx to pose questions during the webinar
About the 2016 Webinar Series

:: Last Thursday each month
:: 1 hour long (2pm ET)
:: Great topics
:: Recorder & archived: [NCC YouTube channel](https://www.youtube.com/c/NationalCyberWatchCenter)
National Cyber League (NCL) in the Classroom

:: Produced May 26, 2016

:: 2pm ET
What is the NCL?

:: Founded May 2011:

:: CSSIA, CSPRI, CyberWatch West, MPICT Center, National CyberWatch
What is the NCL? (con’t)

:: Provide an ongoing virtual training ground for faculty and students to develop and validate cybersecurity skills using content aligned with individual and team exercises
What is the NCL? (con’t)

:: This model is scalable across many industry certifications, curricula, job roles, and verticals
NCL Features

:: Providing fun experiential learning opportunities where students demonstrate knowledge/skill sets tied to industry-validated content and certifications

:: Encouraging inclusive individual & team play
NCL Features (con’t)

:: Preparing players for other cybersecurity competitions (e.g., CCDC)
:: Integrating “soft skills” into team play
NCL Features (con’t)

:: Providing FREE faculty resources for integration into the classroom (e.g., lab exercises, syllabi)
:: Reporting on player performance
NCL Features (con’t)

:: Promoting industry participation (e.g., Facebook)

:: Addressing the lack of qualified cybersecurity professionals nationally
NCL Features (con’t)

:: Practicing & playing from anywhere (all virtual)
:: Using real world scenarios to create engagement
NCL Features (con’t)

:: Aligning competition events to academic calendars
:: Providing a mechanism by which players & coaches can assess the effectiveness of their skills, curriculum, etc.
How It Works

:: Eligibility requirements

:: Hosted *lab exercises* (in **NCL Gyms**):

  --> 40 hands-on labs
  
  --> Moraine Valley supports Gym infrastructure
How It Works (con’t)

:: Lab exercises based on:

---> Security+™

---> Certified Ethical Hacking (CEH™)

---> More on the way…
How It Works (con’t)

·· Lab exercises based on the following competencies:

---> Open Source Intelligence
---> Network Traffic Analysis
---> Log Analysis
How It Works (con’t)

:: **Lab exercises** based on the following **competencies** (con’t):

--> Scanning & Reconnaissance

--> Wireless Access Exploitation

--> Cryptography
How It Works (con’t)

:: **Lab exercises** based on the following **competencies** (con’t):

--- Password Cracking

--- Web Application Exploitation

--- Enumeration & Exploitation
How It Works (con’t)

:: Individual and team **games** (in **NCL Stadium**)

--> Powered by **Cyber Skyline**
How It Works (con’t)

:: Game Challenges (based on lab content and includes):

---> SQL

---> DNS

---> Python
How It Works (con’t)

:: Game Challenges (con’t):
   
   --> Metadata
   
   --> Encryption (including Steganography)
   
   --> Network tools
   
   --> Authentication
How It Works (con’t)

:: Game Challenges (con’t):

--> Wireless access

--> Traffic analysis

--> Email communication

--> Log files
How It Works (con’t)

:: **Conferences**: Eastern, Midwestern, Western

:: **Bracket system**:

  --> Gold (Advanced)

  --> Silver (Intermediate)

  --> Bronze (Novice)
How It Works (con’t)

:: **Preseason:**

--> *Mandatory Preseason game (week-long)*

--> *Players compete on their own*

--> Player results determine their Bracket
How It Works (con’t)

:: **Preseason** (con’t):

--- Facilitates season play amongst individual players with similar knowledge and skill levels
How It Works (con’t)

:: Regular Season:

-->

Players compete on their own

-->

2 games

-->

$20 per player
How It Works (con’t)

:: Regular Season (con’t):

--> Scouting Reports, awards, certificates of participation
How It Works (con’t)

:: Scouting Reports:

--> Individualized report documenting how players performed relative to other players nationally and in their region
How It Works (con’t)

:: **Scouting Reports** include:

:: Player statistics

:: Conference and national rankings

:: Skills validation metrics
How It Works (con’t)

:: Scouting Report Example
How It Works (con’t)

:: **Postseason:**

--> *Players compete in teams*

--> 1 week-long game

--> Schools can have any # of teams
How It Works (con’t)

:: Postseason (con’t):

--> $25 per team

--> Awards and certificates of participation
2015 Fall Season Highlights

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Total # of registered users (Pre/Regular Seasons)</td>
<td>2,153</td>
</tr>
<tr>
<td>Total # of states</td>
<td>41</td>
</tr>
<tr>
<td>Total # of schools</td>
<td>236</td>
</tr>
<tr>
<td>Total # of coaches</td>
<td>298</td>
</tr>
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2015 Fall Season Highlights (con’t)

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<tbody>
<tr>
<td><strong>2015 NCL Fall Postseason by the Numbers</strong></td>
<td></td>
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<tr>
<td>Total # of participants</td>
<td>870</td>
</tr>
<tr>
<td>Total # of teams</td>
<td>129</td>
</tr>
<tr>
<td>Total # of schools</td>
<td>91</td>
</tr>
<tr>
<td>Total # of coaches</td>
<td>97</td>
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### 2016 NCL Spring Training by the Numbers

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
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<tbody>
<tr>
<td>Total # of participants</td>
<td>978</td>
</tr>
<tr>
<td>Total # of states</td>
<td>40</td>
</tr>
<tr>
<td>Total # of schools</td>
<td>197</td>
</tr>
<tr>
<td>Total # of coaches</td>
<td>214</td>
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</tbody>
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# of Participants (Individual-Based Events)

<table>
<thead>
<tr>
<th>Year</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall '13</td>
<td>939</td>
</tr>
<tr>
<td>Fall '14</td>
<td>1368</td>
</tr>
<tr>
<td>Fall '15</td>
<td>2153</td>
</tr>
<tr>
<td>Spring '16</td>
<td>978</td>
</tr>
</tbody>
</table>
Support for Players and Coaches

:: Laboratory exercises in Gyms (24x7)
:: Tutorials & videos
:: Preparation suggestions
:: Solutions documents
Support for Players and Coaches (con’t)

:: Syllabi
:: Coach resources
:: Coach testimonial
Toward the Future - 2016 Fall Season

:: 2016 Fall Season page

:: Schedule
Toward the Future (con’t)

:: Build out additional lab exercises and game challenges

:: Go year-round

:: NCL Annual Report coming soon!
Connect with the NCL

:: Twitter: @NatlCyberLeague

:: Facebook

:: Mailing List
Contact

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:: Executive Director, National CyberWatch & NCL Commissioner
:: cobrien@nationalcyberwatch.org
Thanks!

:: Check your inbox for future webinar invitations and links to today’s recording