



**MVHS CYBERPATRIOT:
COMING BACK WITH A ROAR**

Welcome back returning team members! This competition season will be shorter and more intense than previous years. There will only be three competition rounds this year instead of the usual five rounds. I have published the full schedule in this edition of Bits and Bytes.

The COVID-19 pandemic has had a profound effect on our team. At the start of the pandemic, we stopped all in-person practices, cyber events that our team was invited to attend, and guest speakers. The last event our team attended was the annual CyberTexas Foundation Mayor's Cup Luncheon. This event was a great success and it provided an opportunity for our team to meet members of the other 400 teams in and around San Antonio, college recruits, and listen to some cybersecurity industry leaders. I posted the pictures of the event on the team's Facebook page in a photo album titled Cyber Cup Luncheon.

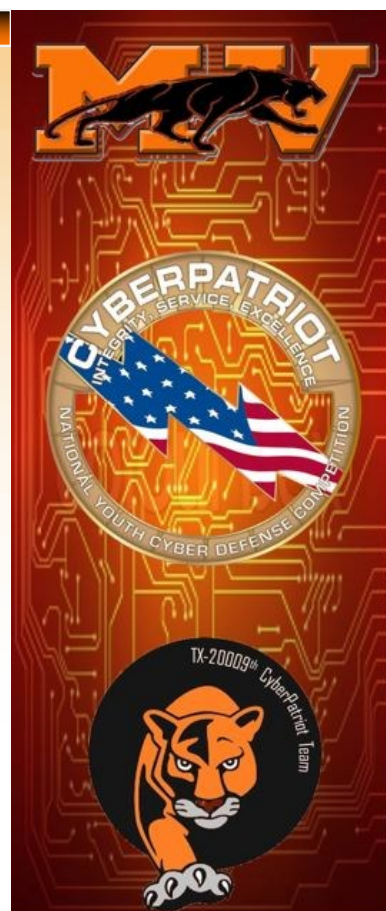
Over the summer, our team members attended virtual conferences which introduced them to the cybersecurity community in the greater San Antonio area. Many of our team members attended cybersecurity and computer programming camps which will help them be competitive in CyberPatriot XIII.

I would like to ensure everyone that we will be following all the health guidelines as prescribed by Medina Valley ISD. During practices and competitions, each student will have a desk with partitions that will help the team members maintain social distancing guidelines. All members of the team, coach, mentor, and school staff will be wearing a face mask. The school staff will provide hand sanitizer before entering the competition area, and before leaving when the competition is complete. Hand sanitizer will be provided to students if and when it is requested.

If any students are interested in learning more about The Medina Valley CyberPatriot team, or if you would like to become a team sponsor, please send the team an email and follow us on Facebook. Contact information is listed on page 4.

Mrs. Joules Webb and I are looking forward to working with the team as they prepare for an intense CyberPatriot season.

-Head Coach Frank Hall



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“Cybersecurity is something that is becoming increasingly more important in business, government, farming, energy, and infrastructure.”



A NEED FOR CYBERSECURITY PROFESSIONALS

Since becoming a CyberPatriot coach, I have often been asked if there is a huge demand for cyber professionals, especially in the rural areas. I always answer in the affirmative. Yes, there is a huge demand for cyber professionals in every state whether you live in the city or the country. Cybersecurity is something that is becoming increasingly more important in business, government, farming, energy, and infrastructure. The State of Texas learned this valuable lesson last summer when 25 municipalities were attacked with ransomware, effectively paralyzing them for weeks and making it impossible to access data or conduct business.

One of my favorite ways to illustrate the need for cyber professionals is sharing the Cybersecurity Supply/Demand Heat Map from Cyber Seek.

This interactive map provides the details on:

- TOTAL CYBERSECURITY JOB OPENINGS
- SUPPLY OF CYBERSECURITY WORKERS
- GEOGRAPHIC CONCENTRATION
- TOP CYBERSECURITY JOB TITLES

Have a look at the map to see the need for cyber professionals by state.

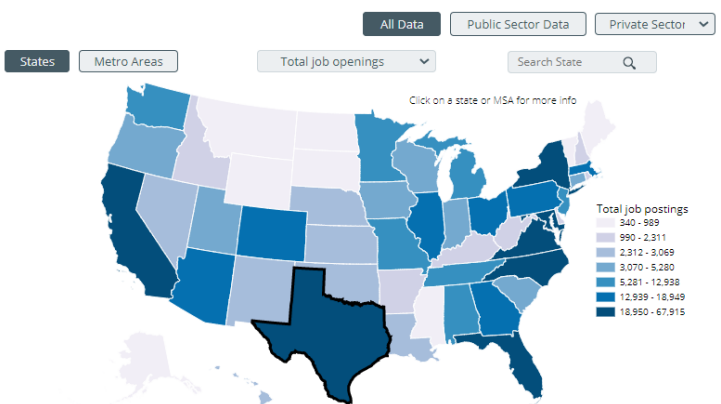
Here is the link to the map:

<https://www.cyberseek.org/heatmap.html>

Cybersecurity Supply/Demand Heat Map

Cybersecurity talent gaps exist across the country. Closing these gaps requires detailed knowledge of the cybersecurity workforce in your region. This interactive heat map provides a granular snapshot of demand and supply data for cybersecurity jobs at the state and metro area levels, and can be used to grasp the challenges and opportunities facing your local cybersecurity workforce.

[Share](#) [Embed](#)



Texas

TOTAL CYBERSECURITY JOB OPENINGS

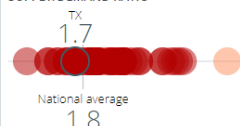
46,279

TOTAL EMPLOYED CYBERSECURITY WORKFORCE

76,826

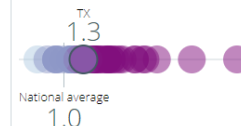
SUPPLY OF CYBERSECURITY WORKERS

Very Low
CYBERSECURITY WORKFORCE
SUPPLY/DEMAND RATIO



GEOGRAPHIC CONCENTRATION

High
LOCATION QUOTIENT



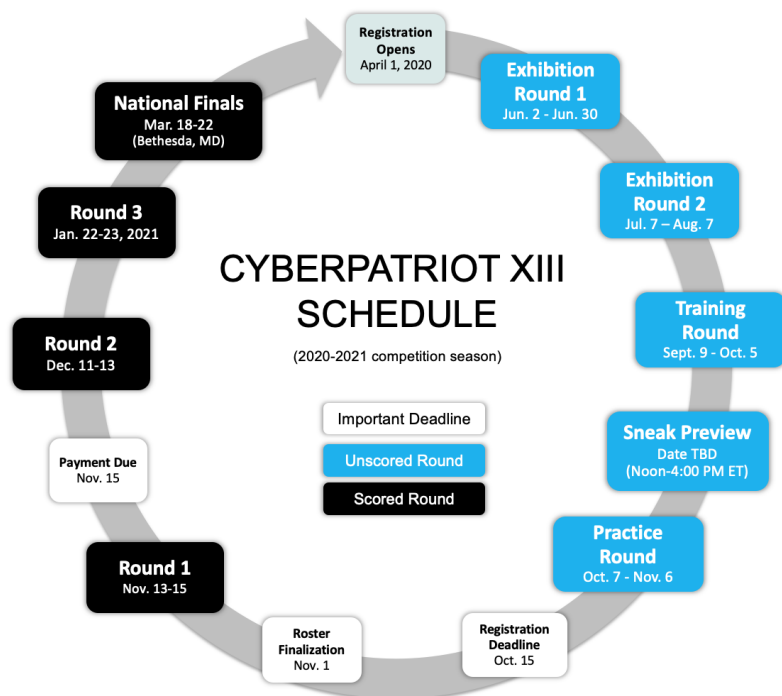
TOP CYBERSECURITY JOB TITLES

- Cyber Security Engineer
- Cyber Security Analyst
- Cyber Security Consultant
- Software Developer / Engineer
- Network Engineer / Architect
- Systems Engineer
- Cyber Security Manager / Administrator
- Vulnerability Analyst / Penetration Tester
- IT Auditor

THIS IS A SNAPSHOT FROM THE CYBERSEEK.ORG WEBSITE OF THE CYBERSECURITY SUPPLY/DEMAND HEAT MAP OF TEXAS.

CYBERPATRIOT XII COMPETITION SCHEDULE

Due to the COVID-19 pandemic, there will only be three competition rounds and the national finals. The Medina Valley CyberPatriot teams (Open and AFJROTC) will compete on Fridays and Saturdays. Open team will get the dates and competition time from Mrs. Webb, I will provide the competition date and time for the AFJROTC tea. Parents, please be aware that competition days and times for each round are subject to change. I will notify the team via e-mail and post information on our team Facebook page.



ROUND	DATES	DESCRIPTION
Round 1 (All teams participate)	November 13-15, 2020 Image download instructions and links are sent to Coaches at <u>5 PM ET</u> , on or before the Monday prior to the competition round. The StartEx email with the password to the images is sent to teams at <u>9 AM ET</u> the Friday of the competition round.	All teams may compete. Tests basic of cybersecurity skills.
Round 2 (All teams participate)	December 11-13, 2020 Image download instructions and links are sent to Coaches at <u>5 PM Eastern</u> , on or before the Monday prior to the competition round. The StartEx email with the password to the images is sent to teams at <u>9 AM Eastern</u> the Friday of the competition round.	
Round 3 (All teams participate)	January 22-23, 2021 (Two Days only) Image download instructions and links are sent to Coaches at <u>5 PM Eastern</u> , on or before the Monday prior to the competition round. The StartEx email with the password to the images is sent to teams at <u>9 AM Eastern</u> the Friday of the competition round.	
National Finals Competition (held in Bethesda, MD)	March 18-22, 2021	National Finalist teams compete for National Championship in their respective divisions.

“Due to COVID-19 there will only be three competition rounds and the national finals.”



"A cyber range is an environment where virtual machines are used to work on and learn about various tools, techniques, and systems in a secure network to simulate real-world challenges faced from hackers."



MEDINA VALLEY CYBER: EPIC CYBER RANGE

Congratulations Mrs. Joules Webb! Medina Valley High School is one of seventeen schools to be granted access to the Texas Advanced Computing Center (TACC) pilot program: Epic Cyber Range.

This is fantastic news for Mrs. Webb's cybersecurity class and the Medina Valley CyberPatriot team. Having access to the Epic Cyber Range will help students in the cyber security course develop cyber skills in a virtual environment. This is a such a great achievement that U.S. Representative Will Hurd posted his congratulations on his social media accounts.



U.S. Representative Will Hurd
September 28 at 1:14 PM · 🌐

Congratulations to Medina Valley High School for being selected as 1 of 17 schools to participate in the Expanding Pathways in Computing (EPIC) program through the [Texas Advanced Computing Center \(TACC\)](#). This program will give students the opportunity to gain hands-on cybersecurity skills to protect companies and organizations from data breaches.

For America to remain a global leader, we must ensure today's students can learn the skills needed to play a part in keeping America safe from 21st-century threats and beyond.

POST FROM U.S. REPRESENTATIVE WILL HURD'S
FACEBOOK PAGE, SEPTEMBER 28, 2020

Here is an excerpt from the article posted by TACC on September 15, 2020 about the selected schools and the Epic Cyber Range.

"A cyber range is an environment where virtual machines are used to work on and learn about various tools, techniques, and systems in a secure network to simulate real-world challenges faced from hackers.

According to the Bureau of Labor Statistics, the rate of growth for jobs in information security is projected at 37 percent from 2012–2022 — that's much faster than the average for all other occupations. With so many jobs available, and the need to fill them so dire, more colleges are offering degrees in cybersecurity, though it has yet to become a staple in undergraduate coursework.



Said Nikki Hendricks, EPIC cybersecurity education specialist: "The EPIC Cyber Range will give students the opportunity to grow their talent now. Industry certifications and good paying careers are accessible to high school graduates or those with associate degrees, making cybersecurity a great career for individuals who are technically adept, but may not be interested in immediately attending a four-year institution."

Here is the link to the full article on the TACC webpage.

Copy and Paste this link into your browser.

https://www.tacc.utexas.edu/-/epic-cyber-range-pilot-launches-to-17-schools-in-texas?fbclid=IwAR2lzHHV_aTDkmSTdDF_Dgpli9ouJdGcuSlXibxnDLFpO0jV-G1yigFRr5Y

MEDINA VALLEY CYBERPATRIOT: USING VIRTUAL MEETINGS TO EXTEND PRACTICE

Since the beginning of the COVID-19 pandemic, I have been trying various methods of meeting with the CyberPatriot team. We have held virtual practices using Zoom and Google Meetings over the past few months. Last week, the Medina Valley CyberPatriot team created a server on Discord.

Discord (<https://discord.com>) is an American proprietary freeware instant messaging and VoIP application and digital distribution platform designed for creating communities ranging from gamers to education and businesses. Discord specializes in text, image, video and audio communication between users in a chat channel.

The team is using this platform as a way to exchange ideas, resources, and to use video teleconferencing tools to conduct virtual meetings. Students can access our Discord server by logging into their website or through the Discord App. I understand that some parents will not allow their children to use this communication platform, so for those students I will continue to e-mail and post information to the team Facebook page. Just as a reminder to team members and parents, you do not need a Facebook account to view the team's Facebook page. Simply search for Medina Valley CyberPatriot team in an internet search engine such as Google or Bing. Once you locate the team's Facebook page, click on the link to view the page.

If any one has any questions, simply e-mail me using the official team address located on Page 6 of this newsletter.



What makes Discord different?

A Place to Call Home

Discord gives you the power to create your own place to belong. Your Discord server is your home, shared with only the special people you invite.

Organized Conversation

Topic-based text channels give you an organized way to talk about all the things you love. Share your latest cooking mishaps while coordinating next week's game night.

Pop in to Talk

Ready to hang out? Grab a seat in a voice channel. They're your server's lounge areas, designed so you can pop in and out of voice and video conversations throughout the day.

“The team is using this platform as a way to exchange ideas, resources, and to use video teleconferencing tools to conduct virtual meetings.”



Medina Valley High School

CyberPatriot Team

We are the Medina Valley CyberPatriots!! We are the cyber warriors that relentlessly defend networks from attack. Our cyber hunting skills cannot be matched. We find threats, eliminate them, and strategically launch counter attacks against our cyber enemies. We are CyberPatriots!!

Medina Valley High School

CyberPatriot Team

Facebook Page Address:
[https://
www.facebook.com/
tx20009MVCPTeam/](https://www.facebook.com/tx20009MVCPTeam/)

High School Website
Link:
[https://
www.mvisd.com/
Page/3001](https://www.mvisd.com/Page/3001)

E-mail:
[fredrick.f.hall@hotmail.c
om](mailto:fredrick.f.hall@hotmail.com)

Angela M. Hall—Chief
Editor

ABOUT THE MVHS CYBERPATRIOT TEAM

The Vision

The vision of the Medina Valley CyberPatriots program is to promote cyber awareness, computer security practices, and cyber ethics. All of these are essential attributes for creating a secure network infrastructure, teaching the students how to detect threats, and how to defend against cyber-attacks in a safe virtual environment.

The skills and knowledge the students will gain from participating in this program will give them an advantage to obtain information technology certifications, scholarships in computer related fields of study, and ultimately provide an opportunity to start a great career in information technology and cyber security.

The Mission

The mission of the Medina Valley CyberPatriot program is the proper instruction and implementation of information technology principals and cyber security practices. All students will be taught how to use various operating systems, interconnecting network devices, and how to secure the entire infrastructure. The students will also be taught how to properly use tools and methodologies to assess and troubleshoot problems that range from inoperable workstations to misconfigured networking equipment. These are the skills that will be necessary to compete in the CyberPatriot competitions and will enable us to advance to each round and ultimately to the national finals.