SPACE CYBER SECURITY WATCH

TLP WHITE

May 17, 2021 - Space Cyber Security Community

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You will find below the Space Cyber Security Watch (N°2 – May 17, 2021). In this paper, you will find everything that has caught our attention since the last time: news, articles, papers, Space CTI, videos, webinars, events, attacks, podcats …

This work is not exhaustive, so comments, remarks and observations are welcome.

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1. New articles

January 2021

- (EN) [Space Cybersecurity: How Lessons Learned on Earth Apply in Orbit](), an article by George Platsis

- (EN) [Cyber is perhaps the most challenging part about space interaction](), an article by Prof. Gregory Falco, a space system security researcher. His research entitled Cybersecurity Principles for Space Systems was highly influential in the recent Space Policy Directive-5.

February 2021

- (EN) [Protecting the new frontier: Seven perspectives on aerospace cybersecurity](), an article by Simon Handler. The following video is on the same subject : [Aerospace Cybersecurity – Protecting the New Frontier]()

- (EN) NATOs Mission-Critical Space Capabilities under Threat: [Cybersecurity Gaps in the Military Space Asset Supply Chain]() by Berenike Vollmer

April 2021

- (FR) [Rhea remporte un contrat pour développer le Centre d'excellence en cybersécurité de l'ESA]()

- (EN) [The Importance of Space Security](), an article on Linkedin by Charles Alexi

- (EN) [Space Command moves for tighter cyber integration](). U.S. Space Command is launching a dedicated joint cyber center for better integration with U.S. Cyber Command.

- (EN) [On National Security | Is space-as-a-service a viable option for the DoD?]()

- (EN) [Open source goes to Mars](). A new Mars 2020 Helicopter Mission badge has been placed on the GitHub profile of every developer who contributed to the specific versions of any open source projects and libraries used by Ingenuity.

May 2021

- (EN) [How commercial space stations could become the final frontier for data and cybersecurity]()

- (EN) [Space Security Challenge 2021: Hack-A-Sat 2 is back to hack an on-orbit US satellite](#)

- (EN) [Report of the Secretary-General on reducing space threats through norms, rules and principles of responsible behaviors (2021)](#). By resolution 75/36, the General Assembly *Encouraged* Member States to study existing and potential threats and security risks to space systems.

- (EN) [Summary of SpaceX Software AMA](#). The SpaceX software team conducted recently a Ask-Me-Anything (AMA) session where they answered to all questions about some of the fun projects they have worked on this past year. This thread is a summary. The complete thread is [here](#).

- (EN) [Space Force Looks to Boost Cyber Defenses of Satellites with Acquisition Reorganization](#). The ongoing restructuring of Space Force acquisition authorities is designed in part to ensure proper cybersecurity testing and monitoring of new programs as they are developed and deployed,

- (EN) [Christopher Stanley said on Twitter that Starlink started a security bug bounty program on Bugcrowd](#). The Starlink page on Bugcrowd is avalaible [here](#). You can earn between $100 and $25,000.

- (EN) [CISA Launches a Space Systems Critical Infrastructure Working Group](#). Read more at [CISA](#)

- (EN) [Space Security Governance: ORF Submission on UNGA Resolution](#). Observer Research Foundation (ORF), a public policy think tank based in New Delhi, India wishes to submit its views on the UN General Assembly Resolution 75-36, "Reducing Space Threats Through Norms, Rules and Principles of Responsible Behaviours."

- (EN) [Space Attacks Open Database Project](#). The goal of this project is to reference the latest known Space Attacks in order to maintain an up to date Database with the contribution of the Community.

2. Some good Papers

- (EN) [Space Threat Assessment 2021 (Aerospace Security)](#). The purpose of this annual report from the CSIS Aerospace Security Project is to aggregate and analyze publicly available information on the counterspace capabilities of other nations, primarily China, Russia, Iran, North Korea, and India

- (EN) [Mitigating Cyber Security Risk in Satellite Ground Systems](#). Satellite ground systems represent an often neglected aspect of cyber security when dis-cussing Air Force and Department of Defense cyber vulnerabilities. An increasing amount of cyber security research and attacks focus on space ground systems in the form of

satellite control, satellite communications terminal hacking, and GPS spoofing. Public evidence exists demonstrating nation-state adversary willingness and intent for attacking these systems.

3. Webinars and past events to review

- (EN) [SEC_LAB: A Secure Communications Testbed for Space Missions](#) (Space-Ground Data Link Security) by Mr. Marcus Wallum (Operations Data Systems Engineer at ESA)

- (FR) Replay du Webinaire sur la présentation de [DefInSpace 2021, un Hackathon unique en France](#)

- (EN) [What Technologies Can Secure GPS?](#)

- (EN) [Securing Software-Defined Satellites](#). Bringing these new designs together in complex systems, never tested before, comes with risks and challenges. One way of addressing these complexities is by employing the same strategy used by NASA and Google self-driving cars – simulation and digital twins.

- (EN) Space Island's monthly meeting on "[Cybersecurity gaps in the military Space Asset Supply Chain](#)" by Berenike Vollmer, researcher on Cybersecurity Gaps

- (EN) [Inaugural Space Cybersecurity Symposium](#) (5 May 2021) with NIST, the Department of Commerce and the U.S. Department of Homeland Security. To learn about the latest cyber threats to space infrastructure, existing space cybersecurity policies, and industry cybersecurity experience and mitigation strategies. Slides presentation and video are avalaible.

- (EN) CCDCOE virtual launch of a new e-volume "[Cyber Threats and NATO 2030: Horizon Scanning and Analysis](#)"

4. Upcoming Events

- (EN) May 17 – 21, 2021 : [Webinar Series on Norms, Rules and Principles of Responsible Behaviour in Outer Space](#)

- (EN) June 1 – 3, 2021 : [MilSat Symposium 2021 – Next-Generation Space Defense](#)

- (FR) 4 et 5 juin 2021 : [Hackathon spatial unique en France avec DefInSpace](#)

- (EN) June 8 – 9, 2021 : [Military Space USA](#) (online virtual event , United Kingdom) – To support the warfighter through transformation and innovation within the US approach to space

- (EN) June 23 – 14, 2021 : [Milsatcom USA](#) (online virtual event , USA) – To achieve and maintain overmatch against its adversaries.

- (EN) September 1 – 3, 2021 : [Geopolitics and Global Futures Symposium 2021](). The 2021 Geopolitics and Global Futures Symposium is now open for applications! [Module 1 is about "The Future of Outer Space Security"]()

- (EN) October 5 – 7, 2021 : [CyberSatGov]() – To bring together the satellite community with the government and military markets to have a comprehensive, progressive discussion about cybersecurity.

5. Past Events

- (EN) May 10 – 12, 2021 : [CyberSatDigital]() – How to identify bad actors, neutralize risks, and thwart threats on our assets in the satellite ecosystem.

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