Software Title Evaluation
Super Smash Bros Ultimate

SUMMARY

Super Smash Bros Ultimate (Smash Ultimate) is the latest edition from the popular series. The game is well-balanced, popular with K-12 students in North America, and has a strong grass-roots community. When installed for use in a school district using WSSEA's recommended configuration guidelines, it's an outstanding and safe esports title choice for middle school and up.

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EVALUATION

Game Description / Overview

Super Smash Bros Ultimate (Smash Ultimate) is the most recent edition of a first-party fighting game for the Nintendo Switch. It was released in 2018. Players control various characters and use different attacks to weaken or push their opponent off platforms in various arenas. There are no loot boxes, gambling mechanics, or cosmetics.

The game is typically purchased retail for $60, and a subscription to Nintendo Switch Online ($80 yearly) is required to play against other people over the Internet. The game is available both as a physical cartridge and entirely downloadable.

There is premium downloadable content (DLC) in the form of additional character cosmetic costumes that can be purchased. Additional "Fighter Packs" of DLC contain additional playable characters, and cost $6 each. Once purchased, they are linked to a Nintendo account and perpetual.

Smash Ultimate is rated **E (10+) for Everyone** in North America by the ESRB, and suitable for ages 12 and up by PEGI in the EU. The rating warning includes cartoon violence, comic mischief, and suggestive themes.

Smash Ultimate is only available on Nintendo Switch devices, and it is developed and published by Nintendo.

Data Categorization

Nintedo consistently gets high marks for brand trust, privacy, and reliability. Nintendo does not sell user information to third parties. As of the 11.0 version update to their software, Nintendo defaults to sharing your data with Google Analytics.

At a high level, Nintendo's policies state that they use the minimum data required to provide their services, and don't sell your data. The only third party processing is happening to provide services and track their metrics. WSSEA gives Nintendo's security posture on privacy and trust high marks.

Personally Identifiable Information and their Privacy Policy

Nintendo notifies that it does collect personally identifiable information (PII) in their EULA section 3. According to their Privacy Policy, this information is never sold but is shared with third party service providers for payment processing, website analytics, customer service, and sending emails - all pretty standard stuff.

Their Privacy Policy mentions adhering to minimizing data collection and specifically information about minors and those under the age of 13, requiring a parent or guardian to consent to use.

Nintendo Online does collect each player's screen name or gamertag, but does not require any PII from players using a school-provided console.

The Privacy Policy can be found at https://www.nintendo.com/privacy-policy/.

Nintendo's EULA

The end user license agreement for the Nintendo Switch is one of the more readable legal documents in the industry - short, clear, and to the point. It covers license to use the console, notification about software updates to maintain and grow functionality, and preservation of their intellectual property rights. The section on user information directs readers to their Privacy Policy.

Data Storage

Use of Encryption

Nintendo uses HTTPS/TLS 1.2 to protect data in transit.

Nintendo SD cards use disk-based encryption to prevent use in other Switches. Any data stored on the SD cards are decrypted at boot time, and unavailable to be used in another system.

It is unknown if the built-in memory uses disk-based encryption, but opening the console and physically moving memory is unlikely.

Locations

Nintendo stores game data on both an internal storage device and the expandable SD card slot if an SD card is present and formatted for use on the Switch. Because of the disk-based encryption, SD cards are not interchangeable between consoles.

Nintendo uses a trusted certificate store on the device for verifying game integrity, although this is to prevent piracy.

Use of cloud storage

Nintendo Switch titles support a Save Data Cloud backup. This feature is available with a Nintendo Switch Online, and Smash Ultimate uses cloud saves to retain unlockable achievements, game time statistics, and unlocked characters. It does not appear to retain PII or other identifying characteristics.

Client Software Footprint

For a fully digital download, Smash Ultimate uses just under 17 GBs of storage. Nintendo Switch has an expandable SD card slot, and it is recommended to use to store the game files. Even when using a cartridge for the game files, some local storage will be required to hold game updates and patches - cartridges are read-only and cannot be updated once shipped.

Compensating Controls

For WSSEA recommended configuration and logical / technical, administrative, and physical controls, please see the WSSEA Nintendo Switch Configuration Guidelines document at https://wssea.games.

Deployment of Smash Ultimate and the Nintendo Switch console in an educational setting with these controls creates the best possible environment for students and faculty.

Developer Disclosure Policies

Published vulnerabilities

Nintendo's Switch has no listed CVEs. There are CVEs for previous consoles and accessories, but none listed for the Switch at either NIST or MITRE.

There has been at least one XSS vulnerability reported to Nintendo's website that could potentially allow an attacker to steal login cookies. This has been fixed, but you can read more at https://www.openbugbounty.org/reports/697505/.

Disclosure program or policies

Nintendo does offer bounties for vulnerabilities, such as cross-site scripting, piracy, cheating, privilege escalation, and kernel takeovers. Read more about Nintendo's disclosure program at https://hackerone.com/nintendo.

Patching track record

Nintendo regularly releases updates for their console OS, with the latest being version 14.1.2 released on June 13, 2022. They typically release 8-10 updates per year, mostly focused on features. It's likely that security patches are included in these updates but not disclosed.

The changelog for Nintendo updates can be found at https://en-americas-support.nintendo.com/app/answers/detail/a_id/22525/~/nintendo-switch-system-updates-and-change-history.

Reputation in the industry

Nintendo suffered a data breach in 2020 with 300,000 accounts compromised. Attackers gained access to full names, country of residence, emails and birthdates, all considered PII.

Nintendo is viewed favorably by the cybersecurity community, largely due to a stronger-than-normal stance on user privacy and protecting younger players. The parental controls are easy to use and easy to find.

ABOUT THE EVALUATORS

Ralph Hogaboom	**Owen Craig**
Ralph is the senior cybersecurity architect at the Washington Department of Natural Resources and received his CISSP certification in 2022. He previously built the competitive esports program at Grays Harbor College, and hosted the NJCAAE's fall championships in 2021.	Owen is the Director of Technology for the Nooksack Valley School District and sitting Board of Directors member for WSSEA. He is focused on providing strategies to overcome technical obstacles school districts may face when implementing an eSports program.

REVISION HISTORY

2022 OCT 8	Ralph Hogaboom	Initial version
2022 OCT 15	Owen Craig	Small corrections, typos