Charting the Course to a Secure Tablet Program

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Chris Ditto, ViaPath, VP of Research & Development

Who are We?

Lucas J Herring

Vermont DOC, IT Director

Tablet operations, networking & implementation

Chris Ditto

ViaPath, VP of Research & Development

Tablet security, software and configuration

Chris Moore

ViaPath, Sr. VP of Business Development

Tablet strategy, features & pricing

Most Common Tablet Applications

FACILITY

○ **Booking Video / Facility Rules**
Videos and documents for incoming offenders

○ **Posters/Brochures/Menus**
Videos and documents providing facility info.

○ **Grievances & Requests**
Full-featured electronic forms/approval system

○ **Online Commissary Ordering**
Compatible with most providers

○ **Religious Library**
A wide variety of resources for all major religions

○ **Online Law Library**
Access to the facility's law library subscription

○ **Yellow Pages**
Access to local business listings and numbers

EMPLOYMENT

○ **Workforce Readiness**
Helping inmates develop job skills

○ **Job Search**
Search only, no communication

○ **Post-Release**
Help finding a job after release

COMMUNICATION

○ **Tablet Phone Calls**
Same calling functionality, but from with headphones

○ **Video Visitation**
Video chat between inmates and family

○ **Messaging**
Text chat between inmates and family

○ **Photo Exchange**
Conveniently share pictures

○ **Staff to Inmate Messaging**
Individual and group messages with attachments

○ **Grievance/Req. Messaging**
Inmate/Staff messages threads tied to submissions

EDUCATION

○ **Access to Existing Resources**
Portal to existing facility education solutions

○ **Independent Learning Portal**
Courses for the self-motivated

○ **Full-Featured Moderated LMS**
Instructor-involved education content

○ **Post-Release Access**
Continued access to learning after release

ENTERTAINMENT

○ **Acuity Games**
Speed, sharpness, dexterity

○ **Puzzles**
Crosswords, sudoku, trivia

○ **Movies / Television**
Commercial-free and edited for corrections

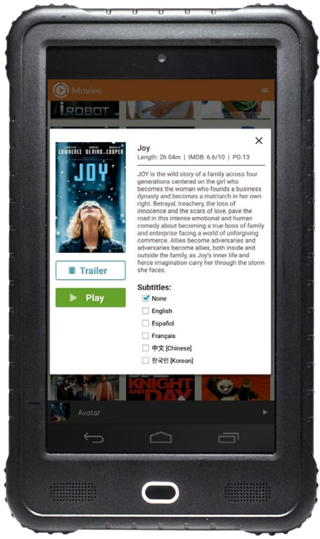
○ **Music**
Streaming music services

○ **Audiobooks / Podcasts**
Fiction and non-fiction audio content

○ **eBooks**
Fiction and non-fiction digital content

○ **Newsfeed**
Up-to-date information on sports, politics, and more

Tablet Functionality



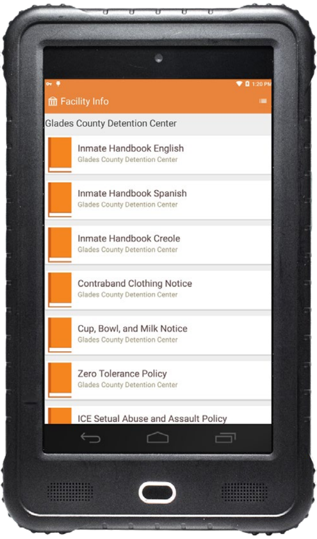
Joy

Length: 2h 04m | IMDB: 6.6/10 | PG-13

JOY is the wild story of a family across four generations centered on the girl who becomes the woman who founds a business dynasty and becomes a matriarch in her own right. Betrayal, treachery, the loss of innocence and the scars of love, pave the road in this intense emotional and human comedy about becoming a true boss of family and enterprise facing a world of unforgiving commerce. Allies become adversaries and adversaries become allies, both inside and outside the family, as Joy's inner life and fierce imagination carry her through the storm she faces.

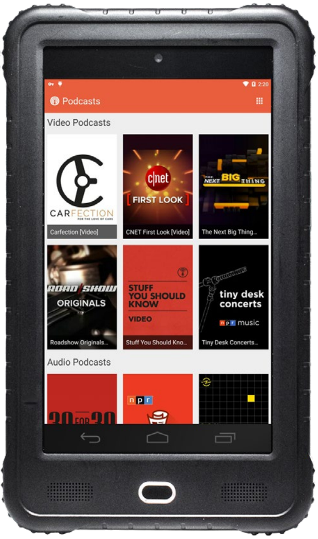
Subtitles:

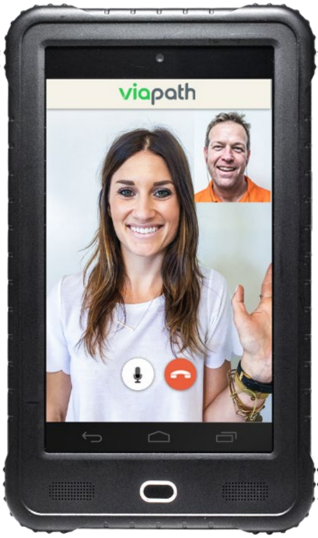
- ☑ None
- □ English
- □ Español
- □ Français
- □ 中文 [Chinese]
- □ 한국인 [Korean]

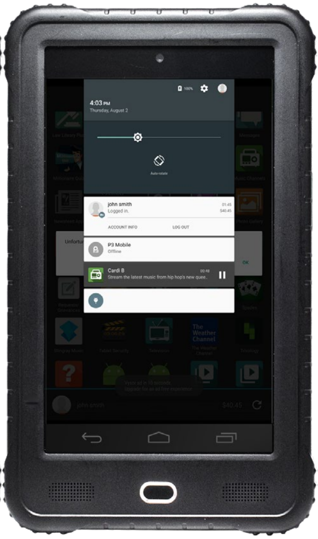


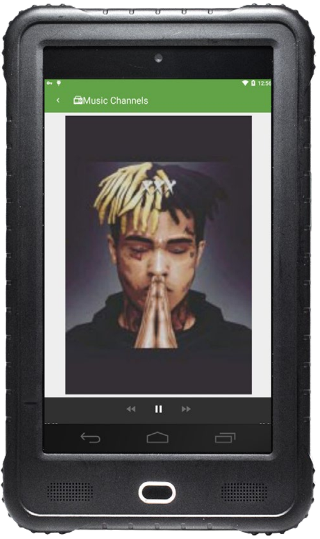
Glades County Detention Center

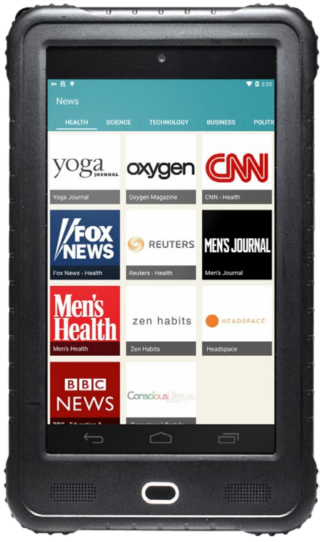
- Inmate Handbook English — Glades County Detention Center
- Inmate Handbook Spanish — Glades County Detention Center
- Inmate Handbook Creole — Glades County Detention Center
- Contraband Clothing Notice — Glades County Detention Center
- Cup, Bowl, and Milk Notice — Glades County Detention Center
- Zero Tolerance Policy — Glades County Detention Center
- ICE Setual Abuse and Assault Policy

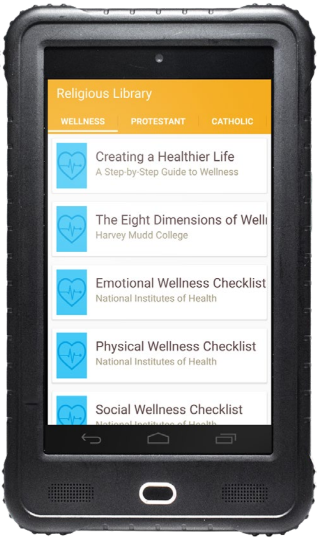




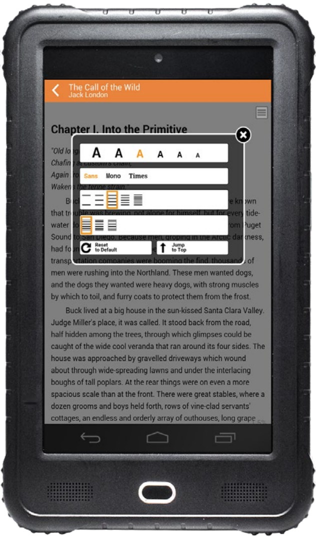








- Creating a Healthier Life — A Step-by-Step Guide to Wellness
- The Eight Dimensions of Welli — Harvey Mudd College
- Emotional Wellness Checklist — National Institutes of Health
- Physical Wellness Checklist — National Institutes of Health
- Social Wellness Checklist



Chapter I. Into the Primitive

men were rushing into the Northland. These men wanted dogs, and the dogs they wanted were heavy dogs, with strong muscles by which to toil, and furry coats to protect them from the frost.

Buck lived at a big house in the sun-kissed Santa Clara Valley. Judge Miller's place, it was called. It stood back from the road, half hidden among the trees, through which glimpses could be caught of the wide cool veranda that ran around its four sides. The house was approached by gravelled driveways which wound about through wide-spreading lawns and under the interlacing boughs of tall poplars. At the rear things were on even a more spacious scale than at the front. There were great stables, where a dozen grooms and boys held forth, rows of vine-clad servants' cottages, an endless and orderly array of outhouses, long grape

'Fixer Upper' star Joanna Gaines tells Instagram followers 'you are made ready' in uplifting post | Fox News

'Fixer Upper: Behind the Design' star Joanna Gaines wrote an inspiring Instagram post on Aug. 14. (Getty)

Joanna Gaines believes we can do it.

"I believe that we're all made ready," she wrote Tuesday on Instagram, while sharing the cover image of the fall issue of "The Magnolia Journal."

She continued, "Whatever season you're in, whatever life may throw at you, whether it feels like success or like failure, expected or unexpected

Gaines expressed similar sentiments in a Tuesday blog post, where she told readers she hoped the latest issue of the lifestyle magazine — whose theme is "Made Ready" — would remind readers they're able to tackle anything.

SPORTS ILLUSTRATED MODEL ROBYN LAWLEY REVEALS SHOCKING FACIAL SCARS AFTER FALLING DOWN STAIRCASE

In the fall issue, the mother to Drake, 13, Ella, 11, Duke, 10, and Emmie Kay, 8, discussed how her recent pregnancy with baby Crew — who was born in June — was different from any other in an essay called, "Made for This."

"I am 40, and pregnancy this time was different," she wrote according to

The Danger

Security Issues

Dangers to Look For

Tablets for Sale Online

If an identical model of tablet is available for sale online, there is an increased risk of that model being hacked and re-introduced as contraband. Even if your facility doesn't offer tablets to inmates at release, another facility may.

Tablet Hacks for Sale Online

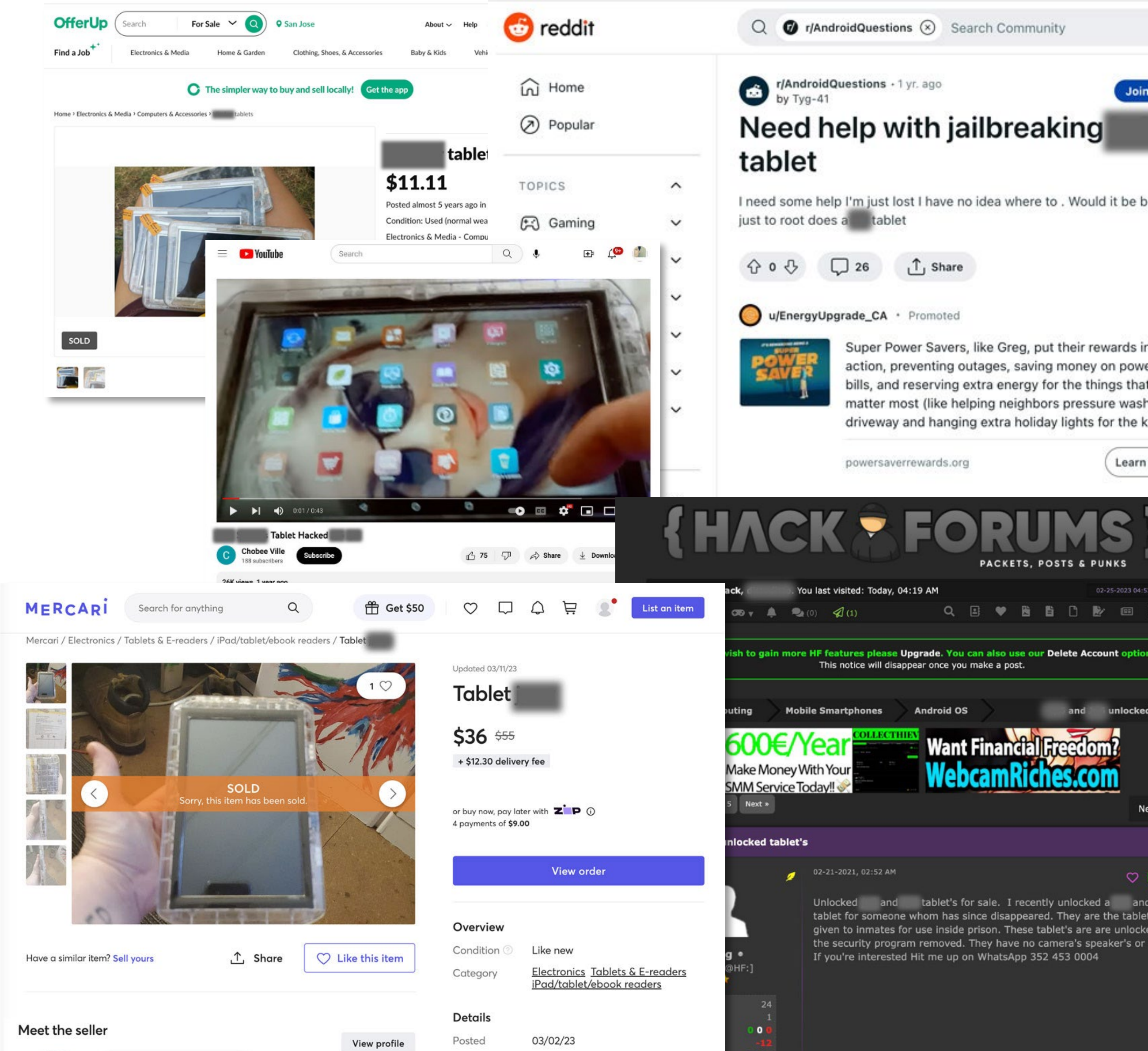
If tablet hacks are available for sale online, that is obviously a huge danger.

Infrequent OS Updates

If a tablet isn't updated frequently, then it is less likely that the vendor will be responsive if hacks are uncovered.

Offline Tablets

Offline tablets may seem safer, but you won't know what they are being used for while they are offline. It could be that they have been hacked and are connected to a contraband hotspot.



Home › Electronics & Media › Computers & Accessories › [redacted] tablets

[redacted] table

$11.11

Posted almost 5 years ago in

Condition: Used (normal wea

Electronics & Media - Compu

r/AndroidQuestions • 1 yr. ago
by Tyg-41

Need help with jailbreaking [redacted] tablet

I need some help I'm just lost I have no idea where to . Would it be b just to root does a [redacted] tablet

0 · 26

u/EnergyUpgrade_CA • Promoted

Super Power Savers, like Greg, put their rewards ir action, preventing outages, saving money on powe bills, and reserving extra energy for the things that matter most (like helping neighbors pressure wash driveway and hanging extra holiday lights for the k

powersaverrewards.org

[redacted] Tablet Hacked [redacted]

Chobee Ville
188 subscribers

75

26K views 1 year ago

ack, [redacted]. You last visited: Today, 04:19 AM

02-25-2023 04:5

vish to gain more HF features please Upgrade. You can also use our Delete Account optior
This notice will disappear once you make a post.

uting › Mobile Smartphones › Android OS › [redacted] and [redacted] unlocked

nlocked tablet's

02-21-2021, 02:52 AM

Unlocked [redacted] and [redacted] tablet's for sale. I recently unlocked a [redacted] and tablet for someone whom has since disappeared. They are the tablet given to inmates for use inside prison. These tablet's are are unlocke the security program removed. They have no camera's speaker's or If you're interested Hit me up on WhatsApp 352 453 0004

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@HF:]
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Mercari / Electronics / Tablets & E-readers / iPad/tablet/ebook readers / Tablet [redacted]

Updated 03/11/23

Tablet [redacted]

$36 ~~$55~~

+ $12.30 delivery fee

or buy now, pay later with zip
4 payments of $9.00

Have a similar item? Sell yours

Overview

Condition: Like new

Category: Electronics Tablets & E-readers iPad/tablet/ebook readers

Meet the seller

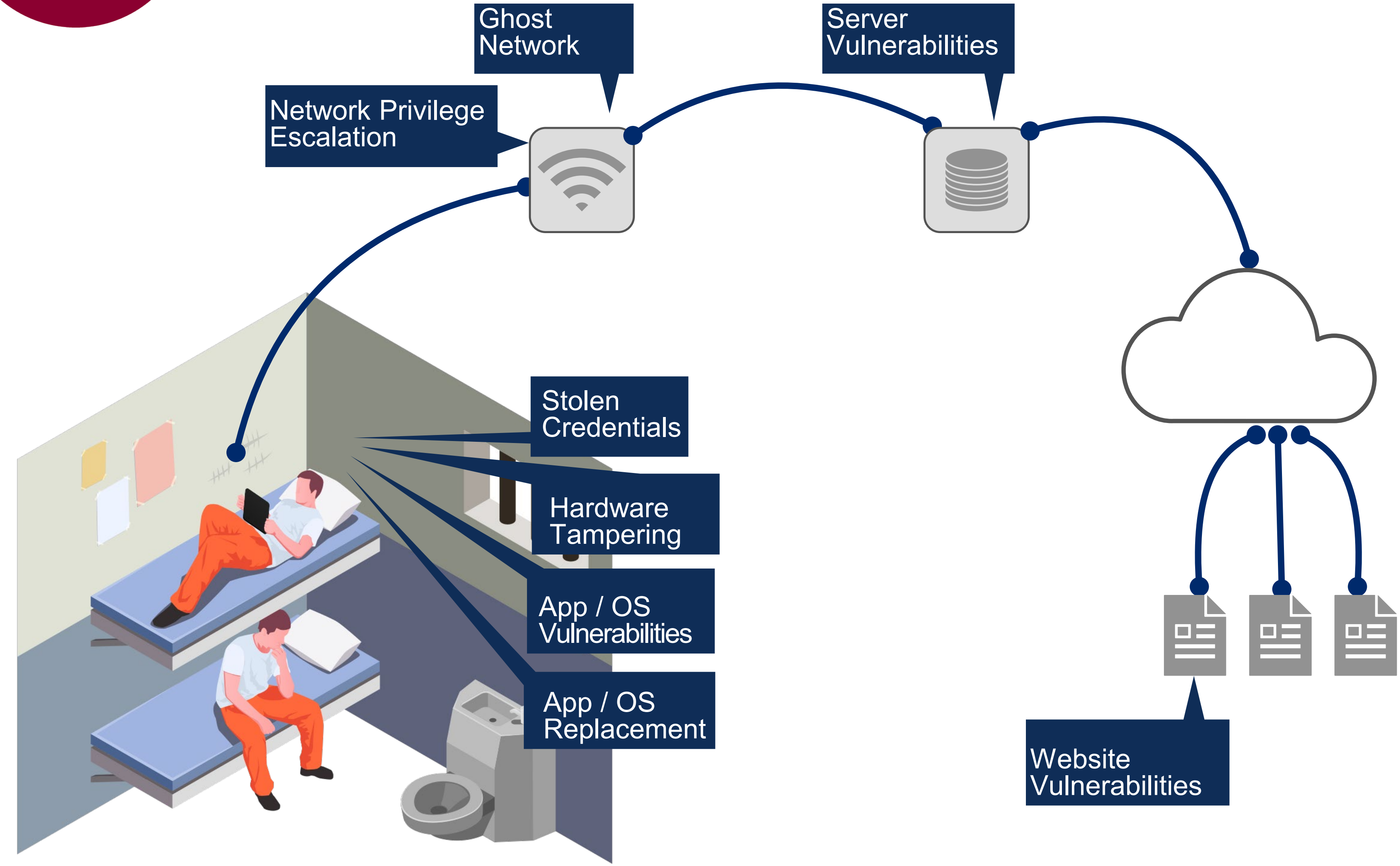
Details

Posted: 03/02/23

Why do Inmates try to Hack Tablets?

- Unrestricted Communication
- Access Prohibited Info / Websites
- They Have No Money
- Exploit Staff and Increase Privileges
- For the Intellectual Challenge
- For Profit

How do Inmates try to Hack Tablets



Ghost Network

Server Vulnerabilities

Network Privilege Escalation

Stolen Credentials

Hardware Tampering

App / OS Vulnerabilities

App / OS Replacement

Website Vulnerabilities

Potential Hardware Threat Vectors

Charging

Challenge: Inmates may look for charging hardware capable of charging contraband devices, or use provided cords to link tablets to onsite computers to introduce unapproved software.

Consideration: Use charging systems that are only compatible with the tablets provided.

Rolling Carts
- ✓ Magnetic Charging (unique adapter)
- ✓ Wireless

Lockable Boxes
- ✓ Magnetic Charging (unique adapter)
- ✓ Wireless

Wall Shelves
- ✓ Magnetic Charging (unique adapter)
- ✓ Wireless

Hard Wired
- ✓ POE (Power over Ethernet)

Charging Cables
- ✓ Magnetic Charging (unique adapter)

Tablets

Challenge: Inmates may attempt to gain root access to tablets allowing them to install alternate software or connect tablets to another network.

Consideration: Only provide tablets that run a feature-reduced customized operating system with secure mobile management software. Updating tablets should require private encryption keys.

Command Tablets
- ✓ Four models and many variations

Wall Kiosks
- ✓ 10", 15.6" touchscreens

Network

Challenge: Inmates may attempt to access prohibited sites from inmate tablets and contraband phones over a facilities inmate network.

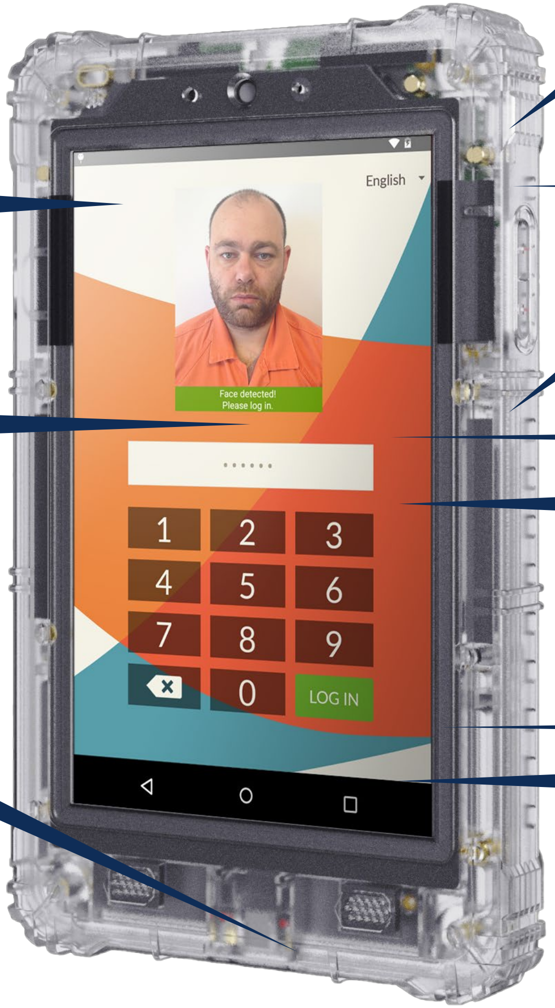
Consideration: Wireless networks should not broadcast their presence. Permitted devices should only be able to access rudimentary services until an inmate user has successfully logged into the approved device. Once the inmate has logged in, they should only be able to connect to pre-approved sites via a secure proxy server. This will ensure that all network traffic is encrypted and routed through a firewall (ideally onsite) that only permits access to destinations allowed for that facility.

Consider using the newer WPA2 protocol, along with an additional VPN layer (additional encryption) if using WiFi.

If looking for in-cell coverage, consider using pLTE, which uses hardware keys (SIM) to connect to the network and further increasing digital security by encrypting traffic with GSM keys.

Options
- ✓ Secure WPA2 WiFi option uses a VPN
- ✓ pLTE option (hardware keys + encrypted communication)
- ✓ Ethernet

Potential Hardware Threat Vectors



Circumventing Software

Inmates may use any text entry field to attempt to trigger a browser window to open with a specified URL, often wrapping the URL in JavaScript.

Consideration

The OS web browser can been removed from the tablet (along with the media player). This prevents the onscreen keyboard from appearing except for specific applications and content sources.

Software Updates

Inmates may take advantage of known vulnerabilities in old versions of operating systems and applications.

Consideration

Tablets can be automatically updated over the air (OTA) to ensure that each tablet is running the latest software. Applications can be updated the same way. OS updates that take place overnight are less likely to be impacted by high traffic or user manipulation. All updates should utilize secure private encryption keys.

Access Port

Commercially available devices typically have a combination charging/data port that allows users to connect the device to any computer to introduce new applications, modify hidden preferences (such as network preferences) or replace the OS entirely.

Consideration

Tablet access ports should either be covered entirely (wireless charging), or blocked with a unique magnetic pin-based system that uses flush electrical contact points (similar to Apple Mag-Safe). Accessing the port should not allow access to the device without private software keys.

Smuggled Devices

Devices available for use outside of a correctional setting can be made insecure by hackers and smuggled back into a correctional facility. Hackers may also search for devices to modify on sites like eBay.

Consideration

Facilities should consider not providing inmates with tablet models that have been sold to inmates at any facility.

OS Reset

Commercially available devices typically have a button combination that allows users to reset the OS to an original state, often introducing insecure options.

Consideration

Tablets should not support hardware resets via buttons and the devices should not contain a minimal “stock” version of the OS.

Crashing Applications

Inmates may repeat an action dozens of times in an attempt to crash the application or operating system, hoping that the action will trigger additional privileges.

Consideration

Tablets should be hardened against these actions, and crashing applications should not result in escalating privileges.

ADA Features

Inmates may attempt to take advantage of external input devices, speech-to-text and captioning systems.

Consideration

Tablets should have a healthy suite of ADA solutions to address customer accessibility needs, but testing and maintaining security around these important compliance features is critical.

Modifying the Hardware

Inmates may attempt to remove case fasteners to gain access to vulnerable internal components and the battery.

Consideration

Tablets should use thermal bonding or security fasteners, along with internal mechanical intrusion detection, to prevent software modification. Accessing the device’s circuitry should not allow any escalation in network access (should be controlled off-device).

PIN Theft

Inmates may try to steal PINs or force other inmates to log into the tablet and then take over the session to hide activities, or bypass permission blocks.

Consideration

Tablets should deter PIN theft by restricting users to a living area and requiring a photo to log in. Taking a photo of the active user at the beginning of their session, and making this accessible to staff, will help.

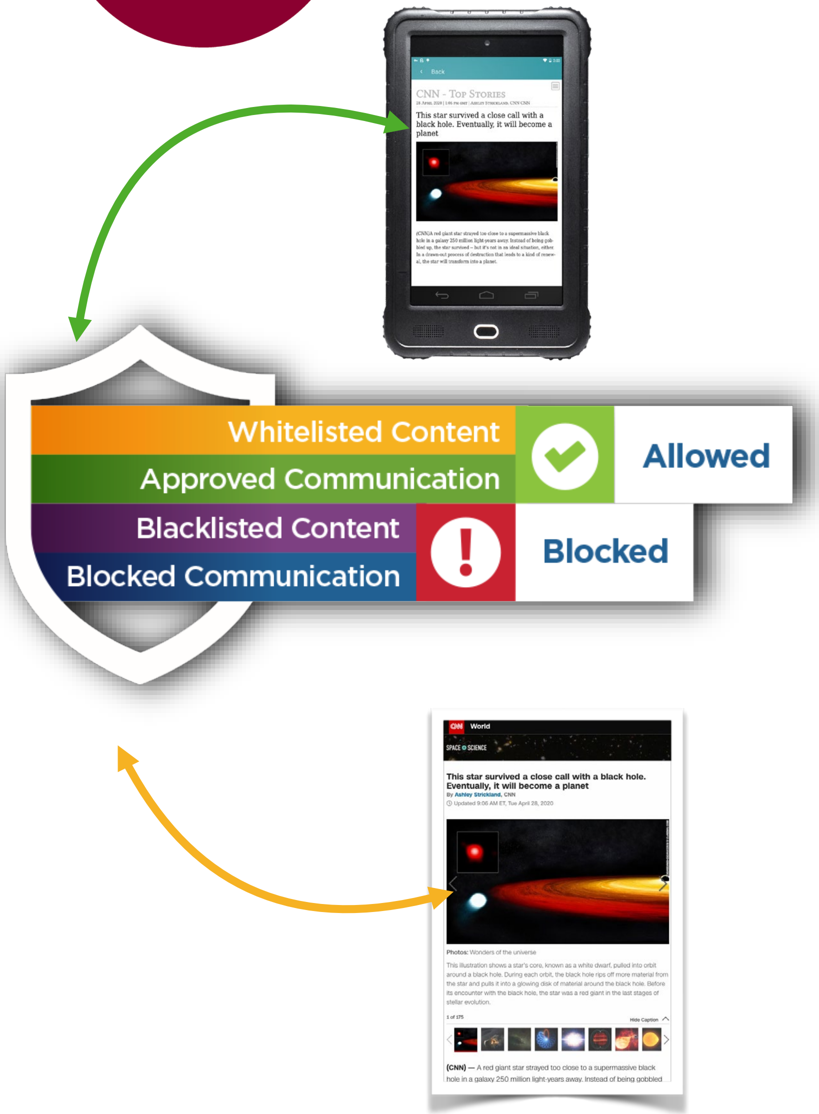
Saving State

Inmates may attempt to save files, text, or application state in order to share messages with other inmates.

Consideration

Tablets can be set to reset each time they are used, preventing locally stored files or application state.

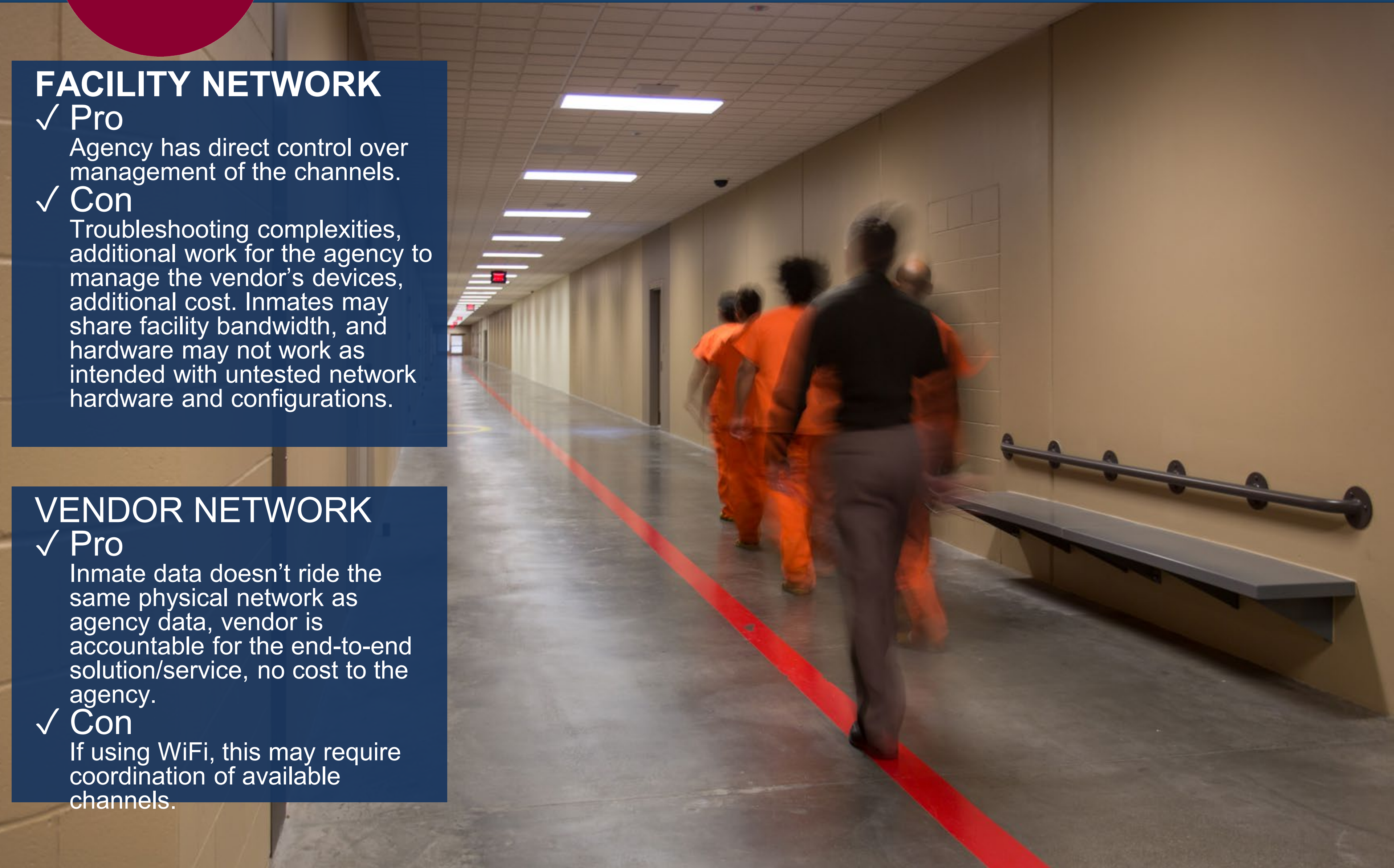
Control Network Traffic



Network traffic to and from tablets should be analyzed and regulated by an onsite server. This server should perform the following functions:

- ✓ **Device Management**
  Ensures authorized devices are connected
- ✓ **Connectivity**
  Handles connectivity for both AWN and WiFi networks
- ✓ **Encryption**
  Ensures WPA2 Encrypted network with VPN encryption per tablet for WiFi traffic. AWN uses hardware keys in addition to encrypted traffic.
- ✓ **Hidden Network**
  Both AWN and WiFI networks do not broadcast their presence, rendering them largely invisible to 3rd party devices without network analysis tools.
- ✓ **Continuous Monitoring & Alerting**
  Industry leading monitoring software provides realtime analysis and alerts of CPU usage, disk activity, bandwidth usage, request traffic, and more.
- ✓ **Proxy**
  Full-featured proxy server, which means no direct connections between tablets and 3rd party sites.
- ✓ **Firewall**
  Blocks outside systems from initiating contact with devices.
- ✓ **Internet Whitelist**
  Access limited to facility-approved URLs, IP addresses, ports, and request types.
- ✓ **Logging**
  Log everything.

Network Control



FACILITY NETWORK

✓ Pro

Agency has direct control over management of the channels.

✓ Con

Troubleshooting complexities, additional work for the agency to manage the vendor’s devices, additional cost. Inmates may share facility bandwidth, and hardware may not work as intended with untested network hardware and configurations.

VENDOR NETWORK

✓ Pro

Inmate data doesn’t ride the same physical network as agency data, vendor is accountable for the end-to-end solution/service, no cost to the agency.

✓ Con

If using WiFi, this may require coordination of available channels.

Ownership Model

Most vendors have moved away from an ownership model and moved to a no-cost lease.

Reasons:

- ✓ Hardware Security: Security concerns related to the devices being available to the public and hacker forums
- ✓ Content Ownership: Hassle related to dealing with “owned” devices and content that must be made available upon release
- ✓ Stratifies Inmates: Only inmates with money get a device, and access to beneficial services.
- ✓ Black Market: Inmates can sell access to an owned tablet for cash and favors.
- ✓ RMAs: The process of providing a warranty, determining fault when tablets stop working, and providing replacements is difficult.
- ✓ Increases Property: Inmates may seek revenge by damaging another inmates owned tablet, and adds to inmate property.

Case Study – VT DOC Tablet Deployment

STATE OF VERMONT DEPARTMENT OF CORRECTIONS

VERMONT

viapath TECHNOLOGIES

Lessons from VT DOC

- Who is allowed to have tablets and why
- Lessons learned related to policy changes
- What are the highest use services/applications
- How are paid services billed
- Tablet ratio – shared or 1:1 assigned
- Method for charging and why
- Choice for network connectivity
- Any other insights

Thank You

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