

Library

by Ben Brown

This is a work of fiction. It was written in January and February of 2024. If you would like to download a copy and add it to your personal digital archive (or read it in an ebook reader), [here is a PDF](#).

Content warning: this story features some (legal) drug use and mild criminal behavior including violence.

This is version 1.1

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I made a book!

I made a limited run of paper copies of this story. The book is a luxurious thick and glossy 50 pages with a cool wrap-around cover featuring a photo of my favorite local shipping container. I sign every copy I ship out. It is also available as a drm-free ebook - you get that free with a paper copy, or for \$3 on its own if you want to sync this baby to your [REDACTED].

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I just want my [REDACTED] to work again. Damned thing worked great. Beautiful hardware, titanium frame seamlessly bonded to sleek matte black plastic base, tiny little rubber feet. Heavy. \$299.99 seemed cheap at the time for what it did. Sold like wildfire, 26 million devices in service after the first year. 100 million by the second. Feels like everyone has at least one.

That is, until the company that sold them to us pivoted their business model. It was costing too much to provide continued free service to all of those devices, they said. They had a duty to the shareholders. New devices would be just as good, cost the same, and we would barely notice the new monthly subscription fee. There would be a grace period, they said.

Then, without ceremony, the backend service shut down and bricked every single one of the devices. It's in the fine print of the terms of service, their right to terminate the service at any time for any reason or no reason. We should have read it more carefully, they said. All complaints now directed to a clause about binding arbitration we'd all unknowingly agreed to during an update to those terms that arrived as an email one Sunday evening.

So one morning I look over and the LED that normally shines a happy green is blinking red because it can't reach its cloud service and I realize, couple hundred million of these things are about to go into the trash.

The way I get into their system is, I just look for the unmarked doors. When you want people to use a door, you put a sign on it. That door says elevator, obviously it leads to the elevator. That door says exit, it goes to the street. No subterfuge here.

But this plain looking unmarked door here on parking level 1, the one in the middle of a long dirty wall scuffed at knee height black by car bumpers? Door painted to match the wall around it. Doors like this in every building, offices and hotels, back part of the mall by the bathroom and water fountain.

Try the handle. Unlocked.

Inside, a small dark room, barely more than a closet. In the dark, three dozen tiny yellow lights flicker. Fumble for the switch in the dark, hand against the back wall. Bare neon tube flickers on through a missing panel in the drop ceiling, revealing the black rectangular metal shape of a server rack mounted against the wall, thick cluster of orange and black cables snaking up across its front and into a vent in the ceiling. From there, leading up to computers and wifi routers and security cameras and oldskool Cisco desk phones throughout the building.

I trace the uplink cables for the top three routers to ports on the fourth whose own uplink leads to a raw hole in the wall. Sawdust and chunks of drywall still on the floor underneath it from when the internet connection for the building was originally installed. Probably nobody in this room since.

Unzip my bag and pull out a triangle of padded fabric. Peel the velcro fastener open. Cables, drives and devices lashed to a mesh with velcro ties. Grab a modified single board computer lashed to an SSD with an extra network adapter - 3 inches by 4 inches by 1.25 inches of 3D printed beauty, my own design etched into the plastic with a laser. Stubby wifi antenna sticking out the back. Pull a 6-inch ethernet cable from its velcro loop and plug one end into router-4 and the other into the probe. My own yellow light starts to flicker as it boots up and comes online, now network peers with the top level routers in the building.

Inside the door marked elevator is a small lobby, plain white walls. Friendly sign showing how to scan your access card to call the elevator. I tap my phone against the card reader and identify it as a common model. Running a dictionary attack against it, I pop three keys, which is enough to emulate a working access card. The elevator dings as it arrives.

I ride up to the ground floor, out of the elevator and around the corner in the direction that leads away from the lobby, into the door across the hall which is the janitor's closet. Cart, trash bags, mop, rolls of toilet paper. Find the janitor's access card hanging from a lanyard clipped to the handle. Scratchy black and white photo taken on a webcam. Tap that with my phone til it beeps. Matches the make of the card reader by the elevator. Store the card value for later - you never know when complete physical access to a downtown office building might come in handy.

Pull out my laptop and sit it on the cleaning cart. Open up the wifi menu and select the option labeled "Network Maintenance Do Not Use" - my own personal wifi network being broadcast from the tiny computer I plugged in to the rack in the parking lot. Login to the chat channel where I see the bot that lives on the probe has also logged in and is currently in the process of recursively mapping the network's layout throughout the building.

BOT > hey @nein. results of initial scan:

It pastes a stubby bonsai tree of ascii lines into the channel, three squat limbs off the main trunk each branch branching again a few times into small clusters of leaves. This is the network layout diagram, the main switches, the subnets.

In the channel, I type:

NEIN > rank these by active traffic

The bot responds after a second with a bullet listing of GUID strings. GUIDs correspond to leaves on the network bonsai tree. Devices on the network sending and receiving data.

Barely any traffic going through router-1, makes sense that's serving the lobby. One bright spot in that branch, guessing someone on the guest wifi streaming, big hard mpeg stream, no DRM, almost certainly porn. If people could see the traffic I see. Router-2 has lots of nodes lit up and sparkling. Normal office business. What's starting to look interesting though is, but my bot interrupts me in the channel and says "Take a look at that hotspot on R3. Private net?" which is exactly what I was going to think anyway it just beat me to it by a few milliseconds.

That spot on the network map right on the edge of R3's otherwise stubby branch is doing 2x the traffic as R2 all by itself, way more than any ten guys streaming porn, like a whole network worth of computers hidden inside that one dot. That's what the bot is saying, they've got a private network using the building uplink but behind their own router. Can't see past it from here.

That's where the regional office of the corporation that manufactures the [REDACTED] is hiding.

NEIN > poke it

Typing indicator throbs while the bot hits that port with a blast of pings.

BOT > It's a Senzo Dynamics router. There's a known exploit from 2017, I'll run it.

The typing indicator throbs again.

BOT > That didn't work, I'm trying something else.

More throbbing cursor. Then, "Bingo."

NEIN> What was it?

BOT > Had to tweak the length of the buffer overflow string to line up a few values. It was wrong in the readme for the original disclosure but

there was a comment in the sample code with the info I needed. We have root now.

The channel scrolls fast while a new ascii tree appears, mapping out the inside of the hidden network. I take a screenshot. People really should patch their shit.

Company like this, everything only ever gets done half-assed at most. You got maybe one eighth the amount of ass you want to have thinking about networking file permissions. Manager probably giving motivational speeches about how they aren't at the point of needing to care about building it right or building it forever, right now it's about product market fit, about landing and expanding, about finding alignment with their business unit. Right now, the most important thing is finding customers, like they're some sort of mythical creature, a winged unicorn thing. Find it, capture it, feed its entrails to the investors.

lol

NEIN > Take all

Progress bar appears in the chat, square brackets slowly filling up with dumpster fire emojis indicating that my SSD is filling up with all juicy data from inside that private network. All the connected device information, all the files located by crawling network file shares, log files of all the network traffic going on inside that network that someone probably told their boss was safely fire walled off from the rest of the internet and exempt from things like passwords and encryption and network security or any kind of security.

Not like I'm some sort of genius, far from it. It's just never the hard stuff that gets you in; just things normal people don't think about too much. That, and I read a lot and have a good memory for things like when someone says there's a buffer overflow in the boot loader of some chip somewhere. And then I obsessively bookmark everything I can find over a 48-hour period about boot loaders and buffer overflows and that specific version of the chip that suffers that particular flaw in the way it loads its configuration file from a well known and easily hijacked part of the on-device file system. The information is out there. Instructions, even.

What I need is this one file, really a folder of files or maybe a zip file. It would be great if that file was here, shared somewhere on the network by someone who didn't know better or long ago forgot or didn't even realize why maybe putting that specific file on the network share was problematic, but shit if they did it would be really great because with that file we can unlock the millions of wifi connected [REDACTED] these jackals marketed and sold us.

With this file, a cryptographic cert used to sign and verify code, we can crack all of those devices open and give control of them to the people who bought them, who own them, who should be able to do whatever they want with them regardless of this company's inability to find a sustainable line of business.

They won't even notice it's gone. I mean, it won't be gone. I'll just have a copy too.

Watching the dumpster fires piling up, lolling to myself about what I'll tell people later, totally not paying enough attention to my situation because this seems so easy. Just another day at the office sitting alone in the dark with a laptop balancing on a dozen rolls of toilet paper, my Converse Allstars up on a Costco-sized box of hand soap refill pouches. Ergonomic.

The fucking door opens and someone walks in, flips the lights on and I'm there like a roach, scabbling in three directions to pack my shit back into my backpack. The guy is wearing a black shirt with a logo screen printed on the back, green pants. Carrying a to-go bag damp with grease from the hot sandwich inside. Face from the badge I just cloned. Fuck.

"Shit fuck I'm sorry man," I say and push past the guy. He doesn't stop me. Back into the hallway, quick as I can into the stairs. Idiot.

Pulse racing, I leap down the stairs four at a time to the garage level. Stop. Breathe. Idiot. But there is a zero percent chance that sandwich dude was going to call security on me. It's cool. I'm cool. Learning opportunity. Growth mindset!

Little bit less bold this time (but still cool), cross the parking lot, thread between a row of parked cars, one Tesla, two Tesla, three, into the unmarked patch closet. Probe is blinking blue, green, blue, green: it did its thing, safe to eject. Yank the cables and back into the velcro pod, everything back into the backpack. Peel and slap a glittering sticker of my logo on the rack. Officially p0wned. Flip the lock on the door handle before I head back out into P1, the door clicks shut. Always leave a place better than you found it.

Up the ramp out of P1 as fast as I can into the afternoon sun. Jump the parking barricade. Down a gravel path along the side of the building to where I left my bike chained to a pipe. Still there. Lean up against a rough concrete pillar that blocks the view from the building front. Root around in my backpack, find a power bank, use a loop of velcro to strap it next to the probe so it won't bang around, plug it in and power it back on. Phone straps to the handlebars of my bike, helmet on, I'm pedaling out of the alley towards the back of the building before it fully boots back up.

Hit the pavement and I open up the throttle on the bike battery and actually manage to skid out Tokyo drift-style as it accelerates off the sidewalk onto the street, or close as Tokyo drift-style as you can do at 12mph. Tap my bluetooth headset into listen mode, say, "Did we get the cert file?"

In my ear, a tri-tone activity indicator jingles for a few seconds while the bot indexes the files it downloaded and performs the search. "There are 63 total cert files in the payload including one found in a folder named [REDACTED] production bundle signing assets and several additional possible matches with similar names" so in other words yes, fuck yes.

"Prep a repository for release" I say. The bot will create a new public website for the cert files along with a readme file that includes instructions on how to use the cert to unlock the device and sample firmware updates to apply to that unlocked device. It'll add information about the history of the company's refusal to support the device and our intent to publish and distribute

these files in accordance with our rights as the device owners, and a license file that says anybody can do anything they want with any of the files forever and instructions on how to mirror the files and host them yourself. Not our first rodeo.

Log lines stream down the phone screen show the progress as files are created, folders moved into place. I can only half watch because I'm steering my bike uphill out of downtown back toward my lab where I can validate that the cert works with my own [REDACTED] before publishing the files for real.

This post is going to get so many likes.

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My lab, affectionate name for Safe-T-Store Unit 3B: corrugated metal door opens to a wall of equally sized white cardboard boxes, 2 feet long, 10 inches wide, 12 inches high, each box with a lid, stacked two deep, three high for most of the wall but four in one spot along where it meets the corner of the unit. Something like, not exactly sure, maybe 7,000 individually bagged and boarded comic books. Literally nothing of any substantial value, mostly obscure indies, alt-presses that never had an audience to begin with and never had a big money corporation keeping them in print or digital, not even worth milking for pennies in some App Store. But dammit, 7,000 beautiful real things made by real people on real paper. I love 'em.

Behind the wall of comic book boxes, a three screen laptop rig, split ergo keyboard, matte black trackpad, everything lit by a (currently) blue bulb screwed into the unit's ceiling. Pile of comics on a scanner, more about that later. I carefully scoop them up — still in bags don't worry! — and stack them with others on an upturned box lid. Close the scanner to make room to drop the backpack to get my second laptop and hook it up to the rig - one cable gripped to the edge of the desk by a tiny rubber clamp hand. Transfer my biz from the phone to the big screen. Almost forgot, plug the SSD from the probe directly into the USB port on my laptop.

NEIN > sync

The drive on my desk spins to life as all the files from the SSD move over, then to the double backup, eventually to the offsite cloud backup. You love something, back it up three times.

It will take days to comb through whatever else is in that payload, but maybe not even worth it in the end since the cert file is the real prize. Plus, even looking hard at the other stuff elevates the risk that someone back at company might give an actual shit. Better for them to realize after the fact. We're doing their customer support job for them better than they ever could.

But back it all up just in case.

Login to the chat and give the crew a heads up that "the op" was successful, everyone lols in the chat about calling it "the op" and there is a burst of emojis, someone claps a high five, someone of course does a poo emoji and then people pile on, the poo pile. Do it for the poos, our channel motto.

In the middle of the desk, my beloved [REDACTED], a useless brick.

I know when a [REDACTED] initially powers on, it does a network detect and will connect by default to any available network. It will call home to a central server owned by the corporation that manufactured it and fetch the latest firmware version number, then check that against its own local system. If a newer firmware is available, it will initiate a process to download the new code and update itself. This is how during normal use the corporation can deploy automatic bug fixes and add new features.

Course, the company's firmware server's been offline since Tuesday rendering this and all other [REDACTED]s inert. Technically speaking a fully functioning, AI-capable networking device with 64 gigabyte local flash storage and the processing power of last year's top of the line desktop computer, yet unable to even start up or pass the boot process because HTTP STATUS 204: NO RESPONSE FROM SERVER.

I control the local network, so I can spoof the necessary server response. Problem is, even if I trick the device into talking to my server instead of theirs and get past that pesky HTTP 204, the very next step in the boot loading process is to check the unforgeable cryptographic signature of the downloaded firmware patch and if it doesn't match the checksum preloaded on the device at the factory, well, you've still got a brick.

Unless you get your hands on that cert file! Then you can sign whatever you want, like your own hacked firmware that permanently replaces that broken connection to the corporate server with one that loads it from mine. Not just that, it opens all the ports on the device to expose all of its capabilities to the clever programmer kids out there.

I open the new repo my bot created and copy the cert file from the "production bundle signing assets" folder into place on the virtual machine that's running my spoofed service. Power on the [REDACTED] with the little round plastic button at its base. I hear a fan inside kick on.

The LED light on back of the [REDACTED] blinks and at the same time, three lines of log text appear on the terminal console on my laptop indicating that something has connected to the spoofed server, requested a firmware version, and initiated a download of the new firmware. The LED goes amber: the update is being validated thanks to that cert file, unpacked, flashed to the hardware.

Ten seconds, maybe fifteen. Seems like forever, amber light just glowing. Can't remember how long it took the last time the company issued their own firmware update, version 2.3, last version ever. Seems longer this time. So, so close to hitting that rubber button, hold it down for 10 seconds to start a factory reset but the light blinks three times then turns off, three seconds, rebooting, lights back up green, steady, online, happy.

> Ping it.

A stream of packet info scrolls down the screen. Promising. I do a port scan. Screen lights up with a dozen ports: all the normal ones and a few extra. Open port 80 in a browser tab and find

a plain looking HTML page with helpful information and a complete admin interface for the device, all its guts laid plain and ready for previously aforementioned clever kids.

Cert now validated, I push the repo to the public website and drop a link to it in chat. Somewhere out there on the net, I can feel all those [REDACTED]s start to wake back up.

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Phone beeps, new message, blue bubble says Dos has to bail on her shift at the library, she's wondering if I can take it, which, yes, duh, would probably end up there anyways since proximity to coffee, also tacos, also new filez to brag about. Pulling a shift will give me a chance to catch up on more scanning comics. Scan and rip and add metadata, add it to the index, cross-reference, backup, backup, backup.

Battery on my bike is low because I forgot to charge it, so I mostly pedal over to the food truck park. Half an hour door to door, a nice ride through the hood, skip the main streets to avoid sudden vehicular death. Pop out across the street from the park, a dusty parking lot with half a dozen food trucks and other vendors, surrounded by a low wooden fence used to keep kids and dogs from running into the street.

Gravel pops under knobby bike tires, I pull up to the bright yellow shipping container, round back where I bolted a U-shaped bike lock-up sideways onto the crate, then melted the bolts with a laser welding torch. Come at me bike thieves. Lock one wheel against the container wall, pull the bike's battery charger out of the saddle bag, root around in the fallen leaves under the container between the row of cinder blocks keeping it out of the mud and gravel, find the extension cable and plug in.

Say hey to Pablo in the taco truck to the left, he waves from the open door of his kitchen and says "hola amigo" with his normal hard to believe level of enthusiasm and warmth. "Want anything?" he says and the image of a steaming bacon egg and cheese taco crosses my mind but I say "not yet" because the library is still locked up and I'm working at 65% capacity without the proper amount of caffeine and drugs in my system.

Lucky for me, on the other side of the big yellow box is a glass walled enclosure built on a thick concrete slab, nothing but green haze through condensation fogged windows, like a giant fish tank with an algae problem. Front door's got a vacuum seal on it, gotta pull extra hard against the air pressure. Inside, the sweet smell of fresh weed plants, a dozen of them lining the room in front of a counter, also glass. Toasty, sitting there, rolling a joint from a bowl generously piled with fresh ground bud. He looks at me, laughs, says, "Coffee or weed?" I say "both."

Toasty knows, pulls me a shot from the already hot 'spro machine at the far end of the counter, hot black swirl in a small porcelain cup, tiny spoon, sugar coated weed gummy on the saucer, smells like orange. Gummy in my mouth, slurp the coffee, feel it melt and run down my throat.

"That real orange?" I say.

"Zested myself," says Toasty.

Like a power up, my system coming back online. Offer to pay, Toasty yanks the card swiper out of my reach. "Spent all night reading comics from a hundred years ago thanks to you," he says, gestures at a tablet sitting nearby. "Man, the layouts back then were rad."

They were, he's right.

I pocket a few more gummies in a reflective ziplock bag. Head back to the front of the yellow container, tap my phone against the lock plate, beeps as it receives my credentials. (System patched last week, no known vulnerabilities.) Hear the magnetic lock disengage, swing the door on the left side of the crate open and back, loop a bungee cable through a hole in the foot and around a hook on the side to keep it from swinging. Big step up into pretty much the best place ever built by human hands.

Not a normal library, obviously. Nothing wrong with those, librarians doing good work every day. Regular card carrying library user here, ok? Just not that kind of library. We got books, movies too, music and all that. Comics, some five thousand I input myself. Artisanal scans, everything done at the highest possible resolution. Not messing around with this, some archival quality shit. Handmade.

This is not new stuff, understand. You want this week's blockbuster, you go to the movie theater like a decent human. Go to a record store, touch vinyl.

Put it this way, if you used to be able to get something but can't get it anymore, we've got a copy in the library. Out of print books. Obscure cover versions of songs released only as promotional downloads. Old video games for foreign game systems that were never widely imported. Movies released only on Betamax and Laserdisc. Ancient episodes of a Canadian sci-fi series that aired locally only at 2AM. DVD commentary tracks, no longer available on the digital download. Software written in BASIC originally distributed on 5 1/4-inch floppies or typed in from pages of a magazine.

Come to the library, bring your own disk, maybe a USB keychain, maybe a portable SSD in a nice padded case. Plug in, pull down copies of whatever you want. Ok, not technically legal. The way I figure, this stuff not being available to people, that's the bigger crime. Our whole history, locked up in old drives nobody can read anymore. We're not stealing anybody's intellectual property. We're preserving it.

Heck, we're not even online. IRL only. You want these files, you gotta pay a visit, connect to the trailer park mesh network. Maybe talk to a person. This is a people network, not a business model.

I climb up inside the container, careful to knock the gravel out of my shoe treads else I'll be listening to rocks clatter on the metal floor all day. Duck under the steel frame of the counter

that runs along the front side, enough room for a person behind and a few in front. Three tall stools. Mess of cables, multi-port hubs, a few tablets set to browse the library index. I slide behind the bar and type my personal identifier into the waiting laptop. Crank the big switch under the counter, joke warning sticker marked "danger" on its side, into the on position. Fires up the neon open sign and a row of circular LED lights stuck to the ceiling with magnets, pools of light glow into existence on the surface of the bar.

Few steps further back into the container, starting where the counter ends, floor-to-ceiling shelves lined with books. The deal is, you work at least three shifts in a month, you get to move a dozen books off the shelves at your house into the library where someone else will pick it up and move them along. Community curated, we call it.

All the way at the end, after the section of local zines, the shelf stops and exposes an opening blocked off by chain link gate, locked with a serious U-lock around the frame. Through there, behind the bookshelf, is a narrow space lined with powder-coated steel server racks, each one filled to the brim with servers and hard drives, all of the storage space and processing power we need for the services we provide the community. This area of the library is not open to the public, admin only.

Pablo from next door at the door, holding a tinfoil wrapped taco in hand. Smell the cheese from here. He's got an ask too: plastic control knob on his griddle split in half, the flat-sided metal pin now the only way to control the flame. He's got a pair of pliers clamped on it, does the job but, he points to a scuffed bandaid on the edge of his hand. Does the library have specs for a knob like that, he asks?

Turns out yes. In fact we've got specs for the exact same knob, downloaded from the manufacturer's website at some point by someone who knew it would be useful later on and wasn't sure it would still be there when they needed it. 3D scans or carefully recreated models of all knobs.

Not too long later, 3D printer is manifesting a knob out of hot extruded plastic and then not long after that, its fit back on the griddle's face looks the same as the factory ones except this one is made of lime green glow-in-the-dark plastic. Upgraded, you ask me.

The number one most popular thing we do here, something we never would have guessed in the first place. Print replacement frames for glasses people sat on. Like, every day, half a dozen pairs of glasses in different shapes and colors. So many, we're thinking about getting a second 3D printer.

When you realize how many things can be fixed with twenty-five cents worth of hot plastic, you start wondering why everything costs so much. All you need is a copy of the right file and you can have one. Companies who sell you new stuff, they don't want you to know. Our collection has all that stuff in there with the movies and comics; 3D scans and deprecated signing keys and old instruction manuals and the older version of the thing you need that still works because it turns out the new version they sold you is crap.

Gummy kicking in or maybe the caffeine, hard to tell. Sound of three dozen drive bays spinning at the back of the container mixes with the hum of Toasty's massive AC, running all day all night keeping the weed plants cozy.

Next customer at the counter is a guy holding a shoebox secured with a few ratty rubber bands.

"Minidiscs," he says. "Live concerts from the 90s. Some great bands." The guy takes the lid off the box revealing tightly packed rows of minidiscs in a rainbow of colors. "I recorded these myself. These are the only copies. But my minidisc player died years ago."

"My man," I say. Am I drooling? I reach into my backpack and pull out the Sony MDH-10 minidisc data drive that I carry with me at all times. Sure it requires a SCSI to USB adapter cable, which, obviously, is velcroed to a molle web inside my backpack's cable pouch. We plug it into the laptop on the counter and start ripping the files.

"Can I make it so anyone can listen to these?" he asks.

Sweet fancy Moses, yes.

Kid shows up, fills a \$5 flash drive with a hundred playable game ROMs none of his friends have ever seen.

This old retired couple, woman carrying a bag of something green from next door. Few weeks back, they discovered our collection of 12 seasons of this Scandinavian murder mystery show, one they'd never heard of. Now they come in every day with an old 2gb drive to fetch more episodes three at a time. They're on season 6.

Young mom, looks a bit desperate. Her kid in the car, melting down, an absolutely critical piece of his LEGO kit nowhere to be found. Can we fab one in the right color? Which one of the 36,000 bricks is it? She gets the kid from the car and he finds it in the catalog in seconds.

New guy wanders in, faded BOG ORC shirt on, like the 70's horror comic. Story of Jack Jones, heroic public defender, chased by the mob, gut shot, left for dead to sink into the ooze. Does a deal with an evil spirit of the bog, gets reborn as a green skinned monster with pointy ears and big teeth, seeks revenge and justice mostly by ripping guys in half. Got the whole run scanned into the library, one of my crown jewels. Nothing like it, available almost nowhere but here, original publisher having disappeared without passing on the rights.

Exactly zero people have ever come in here looking for back issues of Bog Orc, so my heart beats in my ears as this guy browses the books in the back of the container, painful minutes going by, biting my tongue to not put it all out there all at once.

Never even seen Bog Orc on a shirt, not even on eBay. Jealous, for sure.

Screaming inside, can't hold it in any longer, cough out what sounds like "nice shirt." New guy turns from a long row of paperbacks that stretches to the back of the container, looks down at the shirt. "It's a comic from the 70's," he says.

"Yeah," trying not to be offended. "Actually, we got them all," I say, tapping the laptop.

"No shit?" says new guy, coming closer. Pulls out a stool, sits, leans an elbow on the counter.

Type a query on the keyboard. Server behind the bookshelf spins disks, list of filenames starts scrolling down the screen, 1972's original BOG_ORC-V01E01.cbz all the way up to the exceedingly bad and slightly embarrassing to own at all BOG_ORC-V03E02.cbz from 1984, harbinger of looming publisher insolvency and last time he appeared in print. Spin the laptop around so he can see and I can tell he's boggled. Boggled!

"I've never even seen half of these," he says. "Back issues are impossible to find, and the publisher..."

"Disappeared, I know" I finish his sentence, smiling. "Scanned 'em myself. Museum quality. Got a flash drive?"

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Afternoon winds on. Kit arrives, Dos too, the core crew here ready for a weekend night in the lot. Sky color changes through tree branches as the sun goes down, hipsters and families in line for food, weed. Group of kids playing emulated pixel art games from Kit's huge collection, projected onto a big screen that pulls down over the side of the library, pixels a thousand times bigger and crisper than their creators ever intended. Extra long controller cables snaking back into the container, all the way back into the cage where we've got a gaming PC with a huge GPU mounted in the rack. Folks in line for tacos cheering nostalgically at each boss defeated.

Dos is behind the bar, helping someone search for out-of-print ebooks on the tablet. Curls of silvery gray hair, shoulder length, bulky sweater over jeans, Doc Martens. It's her day job as a mid-ranking executive at a big co that pays for most of this and on top of that she comes out and helps people burn CDs for fun, even more often now that her oldest is off to college. Catch her eye, she winks, picks up an empty beer bottle and waggles it my way. Sprint over to Toasty's where we keep our cooler, grab two more.

"Nice drop last night," she says. Bottles clink, take a deep pull. Big props, consider the source. Wrack my brain trying to think of what I wouldn't do for her, but no line to be drawn. All in.

Crowd thins, Pablo closes shop, few stragglers ring the fire pit, too doped out on Toasty's gummies to drive home. Doors of the container three quarters closed now, Kit behind the bar now with Dos and me on the stools, the inside lit mostly by the stack of glowing screens. Kit's Vader helmet of frizzy bleached hair framing his face, doofus Jedi. Veiny heavy metal drummer arms, spindly fingers clack on the keys, intense focus mode. Cracking a new exploit.

"This one could be big," he says. Taps ash off a joint, hands it.

"Oh?" Dos, over sleepy lids. Puffs on the joint, smoke curls from her nose.

"Nah," he says, snickers.

"What's it do?" I say. The joint tastes good, body and brain vibrating together pleasantly.

"It makes crypto-libertarian man boys cry," he says. LOLs all around.

Good crew. Used to be we'd meet up in chat, exchange filez, links, rants. Channel originally spun out of enthusiastic comment thread about an open source ebook platform but quickly morphed into an arcane hangout for this subset of old internet pirates, emphasis on old. Spent fourteen hours a day logged into chat in a background window, occasionally grunting a proof of life into the channel, a gif, a good hack. lols.

Years go by.

One day, Dos is in the middle of an epic rant, how she's tired of letting Silicon Valley capitalist power pigs design the whole world, how she's tired about being told how more technology is always the solution, how she doesn't need anymore internet in her things, how she's already got enough trouble managing her own 60 terabytes of personal data, that's when we're like wait what?

Here's me staring at 3 RAIDs full of discs keeping my lab hot even with AC, my couple dozen terabytes not looking that flash anymore. Kit unspooling his own stats into the channel. We've all been busy, ripping, archiving, adding metadata. All the artifacts: files, old tv shows, ripped CDs, QuickTime files, game ROMs, old firmwares, hard to find foreign movies, hard to find b-sides, text files, dead websites (so many dead websites), PDFs, PPTs, DOCXs, four hundred thousand screenshots automatically organized into dated subfolders, home movies, old emails, scans of old stamps, scans of old trading cards, palm pilot applications, old files that can't be opened anymore, copies of old versions of software that only run on old operating systems, old operating systems, pdf scans of manuals for old operating systems.

DOS > Few racks shy of our own datacenter

Kit pastes a link. When I click it leads to a gallery of photos showing a powder blue shipping container sitting in an overgrown grassy field, up against a leafless dead tree. Doors intact, some rusty parts along the bottom and rear panel, the logo for Senzo Dynamics stenciled in black on the side - the old one, not the bullshit new one. FOR SALE at the top of the page in a big font.

NEIN > :EMOJI WITH HEART EYES:

DOS > :EMOJI CHART WITH LINE GOING UP: :EMOJI EGGPLANT:

NEIN > But offline. Nobody needs more internet in their things.

DOS > Not a datacenter.

DOS> A library

History.

Feeling sleepy from the weed or maybe huffing the fumes from the 3D printer all day, I pat the bar maybe three times too many, lick my lips, building up the motivation for a bike ride home in the dark. Dos already gone, home to her husband and YA offspring.

Kit, eyes tiny dry slits, laptop light casting him in deep shadows. Still tapping on the keyboard, not typing but navigating, watching logs, checking shit out. Joint in his mouth, glows as he takes a puff. "I dunno, this one could actually be kinda cool," he says.

Wave, toss my backpack over my shoulder, check the lock on the chainlink leading to the servers. "Don't forget to shut down," I tell Kit, meaning both the library power and his brain.

The night air cool, I thumb the fully charged bike's throttle to max.

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"Un-fucking-believable," it says. 6am alert from the chat.

NEIN > ??

"Ffffffffff" it says for a second. Someone still typing.

DOS > Fucking litigious fucking fffffucks

Know it's actually bad when there are that many F's. Like, if this was IRL, this is when you duck.

Arriving in the lot, Dos there near the cars, pacing, the phone to her ear, yelling. Wearing a day job logo hoodie. Yoga pants. Distressingly uncool.

Hop off my bike in the gravel and look to lock it up on the big u but, right, that's gone too. Now just a row of dents in the dirt and some cinder blocks. Fffffffff. I wheel over to where Dos is parked by a big oak tree and lean the bike against the trunk.

Waiting for the call to end, take some pics, post them in chat. People waking up, checking the chat, finding out, freaking out. "OMFG what?"

NEIN> they took it. the whole thing. like, gone.

> they who?

NEIN > what we're trying to figure out now

Phone down now, Dos looking shook, says something about copyright, something about a court order, so mad the words coming out don't make full sense scrambled up with all the douchebags and motherfucks and "crack smoking corporate shit gibbons" she keeps mixing in, but the picture's getting painted. She's legit drooling a bit, the cussing coming so hot and angry.

I get her a coffee to help her calm down. She tells me they've got a rep on the way. "With documents," air quotes. She's confident there's no way this stands up in court, but they've got a lot of expensive lawyers. More than us.

White SUV with an Uber sticker in the window pulls in, crunches over the gravel lot towards where we're standing, stops in the middle without pulling into a space. Watching Dos attempt to not stroke out. Back door pops, passenger steps out into the shade of the oak tree.

Wearing business casual, dark sunglasses, full douche. He's got a polo on with a blue squiggle on the pocket that represents an international technology and entertainment conglomerate. 10x13 manila envelope clutched in his hand, the kind that seals with a string that loops around a paper button so they can be reused, "Inter-Department Delivery" printed on one side. He walks over to where Dos and me are standing. "Are you the owner?" he says. Dos nods. He offers her the envelope. She looks at me. I shrug.

Dos takes it from him, unwinds the string and pulls out a stack of papers. She shuffles through them, shaking her head. "Well, this is something else," she says. She hands the stack of pages to me.

There's six sheets of paper in the envelope, held together with a paperclip in the corner, business card slipped underneath, same blue squiggle on it. Chad McFuckface, Esquire. Not his real name.

Photocopies of printout, pen scribbles layered on top and in the margins. On one of the photocopies, two thin columns of text fill the page. Cold sick feeling congealing in my gut as I read down the page that starts with BOG_ORC-V01E01.cbz and goes all the way up through BOG_ORC-V03E02.cbz. Next page, a blurry black and white gallery of cover images, half a dozen at random, details of the original kick-ass art lost in the crappy reproduction. Each cover accompanied by stats describing its extremely high resolution and file size. Artisanal scans. Museum quality.

Take another look at the guy. Not great with faces, but yup, pretty sure it's the same guy that came through a couple of days ago. About the same time he's realizing I'm the same guy too.

"Oh," he says. "Hello again."

Hours later, we find out that the corporation that McFuckface works for recently acquired the exclusive global rights to Bog Orc. Pulling the IP from cultural obscurity and legal ambiguity, now planning a massive reboot: not just new comics but action figures, animated YouTube shorts, lunch boxes, cereal boxes, green bog themed lip gloss, hoodies with pointy orc ears, LEGO bog building expansion packs, a whole cinematic universe of branded products. Fake retro t-shirts on sale at Target, no doubt. Makes me mad how excited I should be about this news.

Now the sole owner and authorized distributor of Bog Orc's ugly mug, they had additionally acquired a fiduciary obligation to their shareholders to protect said intellectual property and maximize its profitable use. They're accusing the library of being, how they put it, a service for the circumvention of copyright and dissemination of copyrighted materials. Claiming damages for each of the individual files in our archive, not just the B.O., but all of them. Talking millions in damages, talking a lien on the library, talking asset liquidation. They had a rented crane at the lot before dawn, hoisting the container up onto a waiting flatbed truck then transporting it to an undisclosed location for "forensic analysis."

All of that bad enough before I went and reacted how I did.

It will never be enough for these people. I take two steps forward, wing the envelope back at him like a ninja star. His arms fly up to protect his face. Still moving, reach round with my left hand to where his polo pops out of his khakis, grab the edge and yank it up and over his head, then pull sharply down over his face. The hem of his shirt catches him under the nose and he spins forward, blind, flailing. I should stop but I don't. Follow through with my right, the best and first punch I ever threw connecting with the side of his face through the material of the polo shirt. He keeps spinning and I let him stumble and fall into the gravel.

My hand hurts immediately.

Guy scrambles to get up, animal fear in his eyes. "What the hell is wrong with you?" he cries, shirt still inside out and halfway pulled up his back, mulch clinging to his pale naked back skin. "That was a mistake," he says, now backing away. "We were trying to be cool about this," he says.

He is extremely not cool about this. Thirty minutes later, that's me, handcuffed in the back of a cop car. Yes, I hear him tell the cop, he does want to press charges. For all the illegal activities I have been up to all these years, this one is not near the top ten reasons I thought I'd get busted.

Dos standing in the empty spot where our shipping container should be, holding my backpack. Don't bother counting the way she deserves to be pissed off at me, and what makes it worse is she won't see it that way. The principle, what counts. Still, this is extra trouble nobody needs.

The sky above the lot is blue with fluffy white clouds. Living in a dystopian corporate hellscape just isn't as cool looking as it is in the movies.

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NEIN > :emoji_of_bald_eagle: freedom!

KIT > we're at my place

NEIN > otw

DOS > shower first

Kit's place is a modest two bedroom on the edge of an older neighborhood that borders the highway. One of the bedrooms completely converted to a studio, sound absorbing foam cones covering all the walls, cherry red drum kit in the middle of the floor, a dozen microphones pointing at it from various angles. Snake of thick black cables running from the mics out the door down the hall to the living room where a six foot wide mixing board sits on a folding table. Home recording death metal drums, Kit's first love. True nerd.

Smell of solder smoke thick in the air. Find Kit hunched over a minuscule circuit board inside a guitar effects pedal, magnifying goggles and a filter mask covering most of his face. Dos a few feet away, two laptops open in front of her. Her teenage son sitting on the couch playing video games on a huge flatscreen TV across the room, looks up when I come in.

"Careful kid," says Kit. "That's a legit violent offender."

The kid coughs out a nervous laugh, but extends his fist for a bump. I shake my bruised knuckles and everyone laughs and Dos makes a comment about delicate computer fingers. My face goes red and I dig in my backpack to avoid looking at anyone. There is nothing in my backpack worth digging for, and after a few awkward seconds I give up, flop down on the couch next to the kid. Everyone looks at me.

"I'm fine," I say. Then, "I messed up."

"But you looked epic doing it," says Dos. Her son cringes, "Don't say epic, mom!"

Knuckles not the only thing that's sore. Had some time in the back of that cop car to think about what crimes to do next. Rant incoming, I warn them. "We can't just let them get away with this."

Dos puts up a hand. "Oh, they aren't," she says. Explains that the lawyers have already sent word that the library has been located in an empty lot behind a strip club on the highway, surrounded by a brand new chain link fence. It's safe for now, lawyers say it's just a matter of time before we get it back to the trailer park. Dos says she hopes it's costing them a fortune.

"We pointed out that no copyright mechanism was circumvented when you scanned the actual physical comic books you own." she says.

"Also, our records show that literally nobody has ever pulled a copy of these files til now so they weren't really distributed," says Kit.

"When they realized there wasn't going to be large amounts of money involved, they pretty much lost interest," says Dos. "Typical."

A tickle of relief, but still, something not sitting right with me. The rant comes out anyways in a hot angry deluge. How we can't let the mega corporations walk all over us. How it won't be enough for them to put our shipping container back in the lot, the damage has already been done. How this should be our rallying cry. How we can never go back to the way it was before, now that we know that a few lawyers and some rented construction equipment is all that stands between us and society's uncontrolled descent into total corporate fascism. Won't anybody consider the plight of the old lady who needs new episodes of the Scandinavian murder show? What will she watch?

My friends sit and listen and nod and giggle at the appropriate times. At one point I realize that I'm standing up, so I sit back down on the couch and cross my arms. "I think I have a way to make sure something like this doesn't happen again."

Kit puts down the soldering iron and pushes the goggles off his eyes onto the sweat stained band on his forehead. "Dude, what do you think we've been working on while you were busy getting arrested?"

Never mess with someone who understands buffer overflow exploits.

+++

It takes a few days to do it, all three of us working together. When it's ready, Dos and I meet at my lab, Kit at his place.

I power on the [REDACTED] sitting on my desk, connect it to my network and send it a ping. It responds exactly the way I expect, nothing out of the ordinary. The little green light flickers with the network traffic.

Dos hands me a USB thumb drive decorated with a sticker of a fried egg. Plug it into my laptop and pull down the new firmware, the one Kit has been hacking on all night. Sign it with the liberated certificate, push it to my local server and reboot. Little LED light goes amber, blinking, blinking, blinking.

Holding my breath.

LED goes green again. The new firmware has installed and taken control of the device. I ping it again, a stream of packets scrolls down the screen. Working.

OK, baby steps. Now the next thing is, we need to verify that the new functionality we've added actually works. I turn back to my laptop and... there it is! On my desktop is a new icon

that looks like a pixel art shipping container, bright yellow.

"Hot damn," says Dos.

I click on the icon. A folder opens: empty. The [REDACTED]'s new feature now serves up a local share, files available to anyone who can connect to this network.

Log into the chatroom.

```
NEIN > it works. @kit do yours
```

```
KIT > On it...
```

```
NEIN > @bot status
```

```
BOT > 2 nodes online. Network capacity: 128GB
```

```
KIT > Check it. I'm adding some stuff.
```

For a second there's a spinner in the window on my laptop, then a file icon appears. Then another. Soon, the list scrolls out of view with hundreds of files and folders appearing.

I put my hand up for a high five and Dos does not leave me hanging.

+++

When you do something like this, it's best not to do it from your personal laptop. Don't like, try this on your home wifi.

It is still dark as I pedal my bike into downtown. Park a few blocks away and walk, hat on and hoodie up. Back downtown in parking level 1, check the door to the server closet. Still locked, I pat myself on the back.

I enter the elevator lobby. I've already got the janitor's access card loaded up on my phone and ready to emulate. Touch it against the card reader and the elevator dings and the door slides open. I step in and with a grunt, heave the metal trash bin from the lobby in after me. The elevator car immediately smells like cigarette butts.

I press the button for two and the elevator heads up. When the door opens again, I shove the trash bin into the entrance to block the doors and step around it. Nobody will be coming that way for a while. The lights on this floor are still off, so I pull out a tiny flashlight to light my way to the stairwell, up to the third floor. The door back into the office is locked, but my emulated access card pops the lock and I'm in.

I look around the space to take it in. Open plan office filled with rows of cubes, a few conference rooms lining the outside edge. Sun rising through the big windows. This office has a great view, would probably not be a bad place to work. Lights are on so I put the flashlight away and unzip my backpack, grab the probe from its padded sleeve.

From the back wall of the office, a person emerges. I thought nobody would be here this early. I throw myself down below the wall of a nearby cubicle. Peek around the corner and watch her carry two big boxes of granola bars into a conference room. She doesn't see me. Still, I've got to be quick. Snacks in the conference room might mean early morning meetings.

From my vantage point on the floor, I can see a white plastic box attached to the wall of the cubicle along the floor. A yellow ethernet cable leads from the port on its side, up through a conduit in the cube's built-in desk where a PC hums above my head. Carefully, I pluck the cable out of the port and leave it hanging.

Uncoil my own ethernet and clip one side into the port and the other into my probe. The device boots up, and I jump onto its wifi network with my phone.

Now, physically connected from the inside, I can route all of my traffic through the corporation's network. Just a few more packets piping through their firewall out to the internet. I could have done this from a coffee shop or other hotspot, but this just felt right. Plus, if anyone is smart enough to trace it back to here, the corporate finger pointing will be hilarious.

NEIN > Ship it.

BOT > Deploying new firmware to auto-update servers.

In chat, status bar starts filling up with little yellow shipping containers. Out there, [REDACTED]s call home to find a new version of the firmware available. Pull down the new bits, reboot, come back online with a little something extra thanks to Kit's genius new firmware.

Now when the little LED blinks green, that means the device has not only come online, but joined our brand new encrypted peer-to-peer file sharing network. Each node hosts a tiny fraction of the files itself, but can access and retrieve any of them over the network established between them. No one individual node is a single point of failure. Each person out there with a [REDACTED] plugged in, helping all the other people to get the stuff they need.

As devices around the world download and apply our update, the storage capacity of the new network shoots through the roof, straight up and to the right. One library's worth, two, three. It will take a while for the full content to come back online, but when it does, it will be undeletable. Permanent. Available to all for free.

The status bar full, I pull the cable and repack my bag. Peek over the wall, don't see anyone, crouch run out of the cubes across the office, crash slightly harder than I wanted into the

stairwell door push bar which makes a loud bang but don't stop to see if anyone heard. I keep going down the stairs, out to the parking lot, out onto the street.

The sun is coming up over downtown. Time for a taco.

+++

Back behind the counter at the library, pulling my normal Wednesday night shift. Ripping a stack of polka 45s someone left at our door in a dusty old milk crate. Printing replacement frames for a pair of reading glasses. No kids around tonight, I've got a sticky joint smoking in the ashtray next to me. Logged into the chatroom, type:

```
NEIN > @bot status
```

```
BOT > 11,860,941 nodes online. Network capacity: 759 TB
```

Our little project turns out to be pretty popular. So many likes. After the initial release, key features of Kit's firmware get ported to other chips, now new nodes popping up on smart fridges and internet connected toothbrushes. More people than ever before using our stuff.

Since the library went online, having a shipping container full of disk drives feels a bit redundant, not that redundancy is a bad thing. All the same, we sacrifice some local storage capacity to make room for triple the number of 3D printers.

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[REDACTED]s, once useless bricks, now selling preloaded with our firmware on eBay for above original retail price.

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- And Bigod 20 for "The Bog" one of the best goth dance songs ever.
- And my real local library, for whom I am happy to provide pro-bono digital backup services.