

Chapter 70 - Cyberspace Foray III

The first thing I did was choose a Segment Container from the available options.

Segment-based quick-hacks had two different ways of being used: Free-form or container-based.

Free-form was the most commonly used because of the segments' flexibility and utility, which was their main draw compared to subroutine quick-hacks. But containers still had their own specific uses and were far from a rare sight.

Mainly, they provided quick-fire access to a specific segment combination at a moment's notice, without needing to think about which segments to combine. It was like pre-loading a script with the segments you wanted to use and having it fire off the same way every single time.

Another advantage was their increased efficiency in terms of Heat generation, as well as the option to add some alterations to the finished quick-hack at an overarching level, without needing additional segment pieces.

If you compared the three different quick-hack methods—free-form segment, container-based segment, and subroutines—you'd see their distinct use cases, even without considering their overall differences in complexity and functionality.

Container-based segments were the most efficient in terms of Heat but the least efficient in terms of RAM usage, with middling storage requirements.

Free-form segments were the least efficient in terms of Heat, while middling in RAM usage, with the lowest storage requirements since you didn't need to save anything extra beyond the segment pieces.

Lastly, subroutines were middling in Heat efficiency, the most efficient in RAM usage, but the least efficient in storage requirements.

Thus, as a netrunner, you effectively had three different "play styles" to choose from, which could impact your hardware choices and vice-versa. Depending on your hardware, you might focus on one path more than another as well.

For me right now, though, all that mattered was that I had access to all three types thanks to Kill Joy's blips.

'Let's see,' I mused as I perused the offerings inside the blip. 'Cracking this force field should be easy, as Kill Joy mentioned, so I doubt I'll need anything super complex. Especially considering I'm using segments created by the man himself. I doubt there's any perimeter defence in this whole world that could keep someone out who used his stuff...'

The easiest container to use in the blip was the 1/1/1 option.

It let me slot one Subject, one Verb, and one Adjective into it, then use it repeatedly without having to redo the slotting step.

'To break through perimeter defence, I'll need to target it first,' I thought, checking the available Subject segments, also known as "Target" segments for obvious reasons.

Several could fit the bill.

'Technically, this force field is a Layer, a Wall, and also a Gate. Maybe even a Door if we stretch the definition. But since it's protecting a whole perimeter, the most logical choice would be the Layer segment,' I reasoned, trying to recall Kill Joy's advice from our recent sessions.

I'd rushed through them during my netrunning-learning marathon, so not every word he'd spoken had stuck. But I believed I'd retained the most important parts.

When it came to targeting, you wanted to choose the Subject segment that best described what you were trying to affect.

If you wanted to open a safe, the best segment would be one designed for safes.

If you wanted to open an ornate stone door, then you'd use one for ornate stone doors.

The closer the Subject segment matched the target, the more effective the quick-hack would be, as it didn't have to guess and fill in the blanks.

Of course exceptions applied to these rules, such as the quality of the segment, the specific makeup of them and around a dozen other factors, but assuming everything else was the same, as I had to assume with these top-tier quality segments provided by Kill Joy, then I was better off using whatever was the closest Subject to what I wanted to target.

With that in mind, I chose the "Layer" segment and slotted it into the container before moving on to the Verb section.

The choice on this one was simple, as it mostly told the quick-hack what it was supposed to do, even if the segments themselves were exceedingly complex. After all, they needed to not only do the job they were supposed to do, but also do so in a way that applied to a damn-near infinite number of use-cases.

Taking the "Open" Verb as an example, the complexity was immediately obvious, when thinking about what it could theoretically apply to.

"Open" could apply to doors, meaning simply to open the door from a distance, like with an automatic door. But it could also be used with something like a safe, where it would need to break through encryption and figure out the password before opening it.

Both were viable use cases for the "Open" segment, but far from the only ones.

The sheer versatility was mind-blowing, and so was the complexity of the act of creating such a segment. The more generalised a segment was, the more complex it became under the surface—exponentially so.

Most “Open” Verbs in the game, from what I remembered, were only viable with very specific Subject segments. The one Kill Joy provided had seemingly no such restrictions, as there were no star indicators on any of the segments in the blip that would indicate the specific restrictions ahead of time.

‘If only I could somehow get my hands on these segments,’ I sighed ruefully.

If there was a way to get Kill Joy’s own segments, I would immediately become a top-tier netrunner, regardless of how much I actually knew about the topic itself, simply because his segments were bound to be of unfathomably superior quality.

Putting aside those thoughts for now, realising that there was nothing I could do about it, I slotted “Open” into the container with a quick thought, before I moved on to the last selection: Adjectives.

With segment quick-hacks, you always had to include at least one Subject and one Verb, but you technically weren’t required to add any Adjectives at all.

The container, however, required one regardless.

That’s just how Kill Joy originally designed them all those years ago and nobody had figured out how to break that restriction, as far as I knew.

Adjectives, as the name implied, described how the quick-hack would behave once unleashed.

They were among the most complicated segments to write if you were creating your own, as they applied to the Subject, Verb, *and* the underlying function of segment quick-hacks in general.

With Kill Joy’s blip, I had access to “Forceful, Fast, Quiet, Reckless, Careful, and Skittish,” all highly useful Adjectives based on my limited quick-hack experience from the game.

Forceful, for example, turned the quick-hack into a brute-force tool.

It wouldn’t care about alerting security, tripping alarms, or avoiding traps, but it would drastically speed up breaking through encryptions, firewalls, and ICEs.

Skittish, on the other hand, was quite different. Unlike Careful, which was the polar opposite of Forceful, Skittish specialised in avoiding enemy netrunners.

It wouldn’t necessarily avoid traps or alerting daemons already in the system, but it would do its utmost to avoid being cornered and *caught*—much like a skittish rabbit.

Using this segment made the quick-hack extremely difficult to pin down and analyse, meaning the defending netrunner would most likely have to resort to area-of-effect, scorched earth type quick-hacks to destroy it, making tracing impossible.

As such, Skittish wasn't exactly a "Stealth"-type segment but more of an "Evasive"-type one.

Unfortunately, I hadn't yet covered the different types and tags of quick-hacks and their segments in Kill Joy's sessions; the cyberspace foray I was on now had come before the more advanced quick-hack lessons that would cover this more in-depth kind of stuff.

'Luckily, I still remember a bit from the game itself...'

For now, I went with the "Careful" segment and slotted it in.

As I did, I was prompted to enter a name for the quick-hack, and it immediately appeared as a usable option in my cerebral interface.

[Quick-Hacks available: 1]

["Open Sesame" — Segment-Container (1/1/1): Layer, Open, Careful]

'Really outdid yourself with the naming on this one, Sera. Fantastic job,' I thought, giving myself a mental pat on the back as the interface displayed the name of my newly created quick-hack in stylized letters.

'Alright, enough goofing around. Time to break in.'

With a simple mental command, I activated "Open Sesame," my eyes locked on the force field just a metre away. Instantly, a neon-green beam shot out from my neck, sizzling through the air with a high-pitched whine, like the whisper of a distant siren.

The beam struck the force field, sending ripples across its surface, before a strange, almost alien hiss started filling the air; a sound like digital static mixed with the groan of bending metal.

The force field almost immediately began to liquefy in a circular-manner out from the point of impact, melting and dripping onto the floor like glass succumbing to a propane torch.

"Whoa..." I muttered, entranced by the surreal spectacle.

The quick-hack was doing its job, dissolving the barrier with extreme efficiency, even with the "Careful" Adjective drastically slowing its normal speed—it was downright frightening to imagine what the quick-hack would have done to the force field if I had chosen "Quick" or "Forceful" instead.

The radiant, molten remnants of the force field dripped onto the floor, disintegrating into shimmering puffs of code—glowing fragments that danced away on a breeze that didn't exist, like cybernetic fireflies caught in a spell.

Each droplet left behind a trail of flickering data, vanishing into the digital ether.

I was thoroughly mesmerised by the vibrant colours, sounds, and visuals for a few seconds, staring with wide eyes and an open mouth, before Kill Joy's voice snapped me back to attention.

"A perimeter security like this is naturally no match for even the lowest of my work, girl. No need to be so in awe; though, of course, I do understand that seeing my marvellous code work its magic is always a treat," the golden avatar of Kill Joy chuckled.

He gestured for me to step through the molten opening, which continued to expand as more molten force field droplets were carried away by the invisible breeze.

"Right. Yes. Of course," I said, shaking off the daze. "Here goes nothing, then."

Carefully inching forward, I stepped through the newly opened, molten hole in the force field, keeping an eye out for any potential dangers or traps. My [Stealth] Skill kicked in as I did, helping me maintain a subdued posture and highlighting areas that needed extra attention.

'Glad to see my physical Skills work in here too. I figured they would based on the faux-Cyberspace sessions, but it's nice to have confirmation,' I thought as I continued to look around.

Surprisingly, it looked just about as I had expected, albeit slightly larger than it had seemed from the outside.

The area of the server I had just entered appeared to be some sort of office building, towering about five or six floors from the ground. I found myself standing in a meticulously maintained garden surrounding the building, complete with neatly trimmed hedges and synthetic trees that swayed slightly, giving off an almost natural vibe.

Looking around, I noticed nothing obviously wrong with the place, except that it was surprisingly bright.

Unlike the outside, with its strange sky filled with data-clouds and slightly dimmed lighting, the skybox inside this server was almost blinding. The artificial sunlight was warm on my skin, and a soft breeze carried the faint scent of something floral.

I knew it was all just data streams converted into sensory input by my cerebral interface, but it truly felt like I had stepped into a mid-summer day.

"This is really cool..." I quietly commented, taking in more of my surroundings.

The office building itself was a sleek, modern design—glass and steel with neon accents running along the edges, glowing in a soft, pulsing rhythm. The windows were all tinted black, with no discernible way to see through them from the outside.

They were likely closed-off sections of the server that would require me to breach again if I didn't want to follow the server's designed path.

I stopped dead in my tracks as my eyes landed on a few small drones buzzing around the garden, tending to the virtual flora with precise, almost artistic efficiency.

“Don’t worry, girl,” Kill Joy’s slightly bored voice chimed in. “Those are just vanity programs, maintaining the server’s aesthetic appeal. They have no alarm capabilities and aren’t really connected to the server’s inner workings at all. Even if you destroyed them, nobody would bat an eye. They’ll just respawn when the server cycles anyway.”

I nodded, taking in what he said.

No need to worry about the drones; I could just focus on exploring the server.

It seemed Kill Joy wanted me to hurry up a bit, but I kept my pace even, not wanting to stumble into a digital trap or trip an alarm for any potential defending netrunners to catch me snooping around—I had exactly zero training when it came to Cyberspace combat, after all.

As I walked around the building, keeping close to the outer edges of the area and following the hedges that had replaced the force field, I eventually found the actual entrance to the server.

It was a large, almost ornate gate overlooking the busy data-highway that was one of the streets of Neo Avalis’ Cyberspace. From the gate, a gravel path led through the garden towards the office, culminating in a set of stereotypical office-type glass double-doors.

‘I bet those will open automatically as I approach. No shot they won’t,’ I thought with a smirk.

Some things were just universally true; one of them was that glass double-doors *always* opened automatically.

I hunkered down at the edge of the building, overlooking the gravel path and the gate, trying to come up with a plan.

“Do I just walk in? That seems like a really bad idea, considering the server shouldn’t have my handshake yet. I didn’t enter through the gate, so anything requiring data from the handshake wouldn’t actually work,” I mused aloud, hoping Kill Joy would correct me if I was way off the mark.

This was completely uncharted territory for me; we hadn’t done any B&E training in the faux-Cyberspace. It had mostly been about moving through Cyberspace without getting overwhelmed by the digital inputs assaulting my cerebral link.

Out of the corner of my eye, I saw Kill Joy nod absent-mindedly at my comments, confirming my suspicions.

“Considering that, I guess the best way to continue would be to simply try and follow the server’s main path until I hit a dead-end where the server requires further data for me to continue. As long as I don’t trip any scanners or alarms, I should be fine.”

I waited a moment for Kill Joy to correct me, but he remained silent. Nodding to myself, I got up and started walking towards the gravel path.

Simply walking out in the open seemed paradoxical to remaining hidden, but that was one of the things Kill Joy had explained during our movement training in the faux-Cyberspace.

When it came to staying undetected, it was often better to follow the natural path of data rather than forge your own path through “stealthier” alleyways.

For servers, this manifested as the “path,” commonly referred to in netrunning circles.

A server’s “path” was essentially the intended route for data to flow in and out or for external agents, such as a company’s computers or the like, to access the data stored within.

Depending on how someone set up the server, these “paths” could be anything from a single server rack in an open field to an office building like the one I was about to enter, with multiple floors and secured rooms.

They could even be mediaeval castles or sci-fi space stations with thousands upon thousands of secured rooms.

It all depended on the architecture chosen by the server’s designer.

The vast, vast majority of the time, however, the server’s internal structure and layout looked eerily similar to its real-world counterpart. Since Cyberspace mirrored the real world, it was simpler to turn the existing 3D architecture it provided into a secure location, rather than to rip it all down and start from scratch.

Furthermore, building an internal server structure to be as impenetrable as a castle took a lot of effort and required a tremendous amount of performance overhead to keep everything secure.

After all, the larger the perimeter and the more rooms, sections and compartments there were, the harder it was for a single netrunner to keep an eye on everything.

Following the gravel path, I walked up to the front door. The glass double-doors, just as I’d predicted, slid open smoothly as I neared, welcoming me inside.

The lobby was somewhat barebones, with a few chairs next to a coffee table arranged in a bit of a waiting-room setup. Across from the door was a reception desk, manned by a single, awkwardly 2000s-sci-fi looking robot.

Its design was all chrome and clunky joints, a relic from an era when people thought robots would look like something out of an old-school sci-fi flick. The robot’s eyes glowed a faint blue, and it seemed to be in standby mode, only springing to life if it detected an actual need for its assistance.

The floor was covered by a red carpet that flowed smoothly past the reception desk, guiding visitors toward another set of glass double-doors on the right side of the lobby.

These doors led deeper into the building, presumably closer towards the server’s core.

The ceiling had floating orbs of light, casting a gentle glow that seemed to adjust dynamically, avoiding harsh shadows and making the space feel open and welcoming.

“Guess they didn’t bother with much decor,” I muttered, appreciating the oddly minimalist aesthetic. “Definitely thought they’d be a lot more fancy with things, considering the garden outside...”

The lack of people added to the eerie serenity of the place. The only movement came from the gentle pulses of the holographic advertisements plastering the walls of the waiting room and the occasional flicker of the robot’s eyes.

I carefully stepped forward towards the robot, not sure whether it was part of the vanity-programs that Kill Joy had mentioned earlier or whether it was an actual programmed part of the system.

As I approached, its eyes brightened, and it suddenly twitched awake and turned its head towards me with a mechanical whir.

“Welcome,” it said in a flat, synthetic voice. “How may I assist you today?”

I side-eyed Kill Joy, who was leisurely floating next to me, unsure of how to respond, but the golden god of Cyberspace remained frustratingly silent, simply gesturing for me to respond to the robot.

“I’m just exploring,” I replied, keeping my response vague, not sure whether or not things were being recorded in some fashion.

The robot blinked a few times, its programming seemingly struggling to process my non-specific answer.

“To access the stored data, please proceed down the main corridor,” it finally said, gesturing toward the double doors with a jerky arm movement. “If you require further assistance, do not hesitate to ask.”

I stared at it, slack-jawed.

‘What? Why the fuck would it just tell me where the data is like that?’

Backing away from the reception desk until the robot returned to its standby mode, I turned to Kill Joy, utterly confused.

“What’s up with that robot? Why would it just tell me where the data is? How does that make any sense? Shouldn’t the server be trying to hide the data as best as possible?”

The familiar, smug smile spread across Kill Joy’s golden face as he floated back, seemingly ignoring all laws of physics. “Well, well, well. This *should* be something you can answer yourself already, girl. With everything this generous and erudite teacher has taught you, surely you can come to some kind of a conclusion, at the very least?”

I rolled my eyes, not bothering to hide my annoyance, and sat down on one of the chairs in the waiting area. Sitting was the next best way to think after pacing back and forth, and I wasn’t in the mood to walk around.

Surprisingly, a thought came to me quickly. “If the robot’s part of the server’s design rather than a vanity program, it would be the first point of contact for external agents seeking information about the server,” I mused aloud, watching Kill Joy nodding slowly. “Meaning the robot is not actually a form of security but more like a guide for data and external agents?”

With a thumbs-up, Kill Joy floated closer, nodding again. “See, I knew you could figure it out easily enough, girl. Don’t always assume you don’t know things. I’ve taught you quite well in the lead-up to this excursion, after all. With such a handsome and smart teacher, there is practically nothing that should be impossible for you to figure out.”

“Alright, alright, I get it,” I said, rolling my eyes again but feeling a bit more confident. “Let’s see what else this server has in store.”

I stood up and made my way toward the double doors the robot had indicated, taking a deep breath.

The server’s path was designed to lead me further inside, closer to the actual data-storage locations. No point in trying to diverge from it just yet, but I knew I’d run into obstacles sooner or later.

The doors slid open smoothly, revealing a long corridor lined with dozens of holographic displays, each one showcasing a vast number of advertisements.

“Why are there so many ads in here? Isn’t this a private server?” I asked, almost feeling like I had wandered into a malware-infested browser.

“Most companies want to recoup whatever server costs they can,” Kill Joy answered, surprising me with his sudden penchant for answering random questions. “Even if they only have a few hundred employees, setting up advertisements like those can help cover some of the server costs. The actual increase in distance for the data to travel is minimal by adding a corridor like this, but for any netrunners or external agents who aren’t directly hooked up to the server itself, the company gets paid for each ad that is passed by. That’s also likely why you haven’t run into any serious security yet. Why block off potential ad revenue before absolutely necessary, right?”

“Ah, makes sense,” I said, nodding. “Greed and efficiency rolled into one. Classic corpo move.”

I moved down the corridor, the holographic ads flashing around me with everything from slick car commercials to high-tech gadget promotions. It was a weird juxtaposition, navigating through a security server while being bombarded by ads for the latest smart toaster.

At the end of the hallway, I reached a T-intersection. The carpeted path continued to the right, while a more utilitarian hallway led to the left.

“Huh... What do we have here?” I mused quietly, instinctively moving down the left path. Everyone knows you’ve got to avoid the main path if you want to find all the hidden secrets.

I didn’t get far before I felt a strange pull.

I stopped dead in my tracks and took a few steps back until the pull disappeared.

“What the...? What was that?” I asked Kill Joy, pointing down the hallway.

“Security,” he replied nonchalantly, floating in lazy circles around me. “A forced handshake attempt to check for specific data—likely some kind of access code given by the server upon entry, double-checked here. Or something even more secure, like an admin code, considering we’re off the main path.”

‘So it’s like one of those scanners at the airport. If I get close, it’ll scan me and realise I have tons of plastic explosives packed into my water bottles, as per usual,’ I thought, eyeing the hallway more closely.

I tried to spot a visual tell for where the forced handshake would happen and, surprisingly enough, found a slight bit of wavering air a few metres away, clinging to the walls, ceiling, and floor.

‘Some kind of digital illusion, maybe? Trying to hide the scanner?’

I had no idea what I was dealing with here, but I couldn’t deny that the mystery was somewhat thrilling. Double-checking the blips I had access to, I quickly realized I didn’t have anything to bypass this kind of security. At best, I could breach it open, but even then, I only had five uses left in total—two for the segment blip and three for the subroutine one.

“Is there any way to disable the handshake?” I asked Kill Joy, feeling completely out of my depth. Cyberspace was a strange place, and I really had no idea how any of this could possibly work—it was far removed from the limited experiences I’d had in the game.

“If you can’t come up with anything right now, then I guess not,” Kill Joy shrugged before flipping upside-down and continuing his lazy circling around me.

He reminded me of the Cheshire Cat with his strange antics today.

I had quietly hoped he’d provide me with some blips to bypass the security here, but that seemed unlikely based on his reply.

‘I could breach the walls and work my way around the security that way, but that would cost me at least two uses... I don’t really have proper breach blips either; all I can do is open or unlock things—’ Inspiration struck.

I quickly threw together a free-form quick-hack using the segments Gate, Unlock, and Quiet, then directed it at the scanner.

A nearly invisible line traced from my neck to the strangely wavering air as the quick-hack got to work.

I watched in rapt attention, trying to see if there were any telltale signs that the quick-hack was failing or succeeding, but there was no visual indicator of anything happening at all—the “Quiet” portion of the quick-hack really living up to its name.

Its primary purpose was to hide quick-hack attempts, making it the most quintessential of all “Stealth”-type Adjectives.

After a few moments of anticipatory silence, the almost invisible line simply turned green, with no other indications of anything having happened at all.

“I guess I’m in...?” I muttered, half to myself, half to ask for Kill Joy’s confirmation.

The slight nod he provided was all I needed to continue my search for the lesson’s end. I gently walked through the scanner unbothered, feeling a mix of relief and excitement as I continued down the corridor towards the next door...