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WHITE PAPER

The new perimeter is identity

A practical guide to MFA and identity security for organizations where the login has become the front door.

For: IT and security leaders responsible for accounts, access, and the people who use them, at organizations of any size.

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Executive summary

For most of computing history, security meant defending a boundary. You built a strong perimeter around the network, kept the bad actors outside, and broadly trusted what was inside. That model has quietly stopped working. Applications moved to the cloud, work moved off the corporate network, and the firewall stopped being the edge of anything. The thing an attacker now has to get past is not a network boundary. It is a login.

This paper is for any organization that rolled out multi-factor authentication and assumed the identity problem was solved. It explains why identity has become the primary attack surface, why MFA on its own no longer stops a determined attacker, and how to build an identity program that holds up against the techniques in active use today.

The thesis is straightforward. The strongest defense is no longer a taller wall around the network. It is making each identity hard to steal, hard to misuse, and easy to monitor. In practice that means moving up the authentication ladder toward phishing-resistant methods, tightening what each account is allowed to reach, and watching for the moment a legitimate identity starts behaving like an attacker.

What you will leave with

- Why stolen and abused credentials now lead the list of how breaches begin.
- The bypass techniques that defeat ordinary MFA, and what actually stops them.
- A maturity ladder for authentication, from SMS codes to passkeys.
- A decision guide for what to run in-house and what to delegate to a partner.

1. Why identity became the perimeter

Two shifts happened at the same time. Software moved to cloud and SaaS platforms reachable from anywhere, and people started working from anywhere to use it. Once both were true, the network boundary that security was built around no longer described where the important things lived. What every one of those cloud services has in common is a sign-in page. Authentication, not the firewall, became the control plane.

Attackers follow the easiest path in, and for several years that path has been credentials. Industry breach reporting consistently places stolen or abused credentials at or near the top of how intrusions begin, ahead of software exploits, with phishing close behind. Roughly one in five breaches starts with a credential, and the broader human element of phishing, social engineering, and simple mistakes shows up in a majority of them. These figures move year to year, but the ranking has been stable: the login is where attacks start.

Credentials are also cheap and plentiful. Infostealer malware quietly harvests saved passwords and active sessions from browsers by the millions and feeds them into criminal markets. For an attacker, buying a working login is often quieter and easier than breaking one. The result is an economy built around valid credentials, sold and reused at scale.

> **IN PRACTICE**
> A stolen password does not look like an attack. It looks like a normal sign-in from a real account. That is the whole problem. The tools built to spot malware and network intrusions were never designed to question a valid login.

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2. MFA is necessary, and no longer enough

Multi-factor authentication was the right response to password theft, and it remains a baseline that belongs on every account. But attackers adapted. The frontier moved from stealing the password to stealing the session that authentication creates, or to convincing the person to approve access themselves. Four techniques are in routine use, and ordinary MFA stops none of them reliably.

Push fatigue

When MFA sends an approval prompt to a phone, an attacker who already has the password can trigger that prompt over and over. Late at night, after the tenth notification, someone taps approve to make it stop. Number matching, where the user types a code shown on screen, raises the bar but does not remove the human weak point.

Adversary in the middle

A reverse-proxy phishing page sits between the user and the real website. The victim signs in through the fake page, which relays everything to the genuine site and captures both the credential and the session token that authentication produces. This defeats SMS codes, app codes, and push approvals at once, because the attacker is stealing the result of a successful login rather than any single secret.

Session and token theft

Infostealer malware lifts live session cookies directly from a browser. A stolen session can be replayed from the attacker machine and will often outlive a password reset, because the session was already authenticated. Rotating the password does not always end the session.

SIM swap and the help desk

Phone-based factors can be hijacked by taking over the number itself through a SIM swap, after which SMS codes arrive at the attacker. And the most reliable bypass of all is a phone call. An attacker impersonates a user to talk a help desk into resetting MFA, or impersonates IT to talk a user into reading back a code.

> **THE PATTERN**
> Every one of these techniques works around MFA rather than through it. The lesson is not that MFA failed. It is that the factors differ enormously in strength, and that prevention at the login needs detection sitting behind it.

3. The authentication maturity ladder

Not all factors offer the same protection. It helps to picture MFA as a ladder, weakest at the bottom, and to know where each of your systems currently sits.

SMS and email codes

Better than a password alone, but phishable and interceptable. These factors are vulnerable to SIM swap and to relay through a fake page. They are acceptable as a fallback and weak as the primary factor for anything sensitive.

App-generated codes

Time-based codes from an authenticator app remove the dependence on the phone network, which closes off SIM swap. They remain phishable, because a user can still be convinced to type the current code into a convincing fake page.

Push approvals

Approving a prompt is convenient, and the weak point is human rather than technical. Push fatigue and accidental approvals are common failure modes. Number matching helps, but the method still relies on a person making the right judgment under pressure.

Phishing-resistant authentication

At the top of the ladder are FIDO2 and WebAuthn credentials, delivered as passkeys, hardware security keys, or certificate-based credentials. These use public-key cryptography bound to the real website address. A credential will simply not validate on a lookalike domain, which removes the relay attack and the typed-code problem at the root. Hardware keys offer the highest assurance, because the private key never leaves the physical device.

A word on the term itself. Phishing-resistant is precise and worth using carefully. It means the credential cannot be replayed against a spoofed site. It does not mean an account can never be compromised, since a help-desk reset, an account recovery flow, or a compromised device can still create an opening. Resistant does not mean immune, and the surrounding controls in the next section are what close the remaining gaps.

> **IN PRACTICE**
> Passwordless adoption is climbing quickly. Major platforms have begun making passkeys the default for new accounts, and vendor data shows phishing-resistant sign-ins growing year over year. The direction of travel is clear, and the organizations that move privileged users first see the largest risk reduction for the least disruption.

4. Beyond the login

Strong authentication is the foundation. The next layer decides what an authenticated identity is allowed to do, and notices when that identity starts to misbehave.

Single sign-on

One front door, consistent policy, and far fewer separate passwords to steal. Centralizing authentication through single sign-on is what makes every other control enforceable, because policy can be applied in one place rather than service by service.

Conditional, risk-aware access

Evaluate the context of each sign-in, including device health, location, and behavior, then step up the challenge or block access when something looks wrong. A login from a managed laptop in the usual city carries different risk than one from an unknown device overseas, and policy should respond to that difference automatically.

Least privilege and just-in-time access

Most accounts can reach far more than they ever need. Trimming standing privileges, and granting elevated access only for a specific task and only for as long as it is needed, shrinks what a stolen identity can do. A compromised account is only as dangerous as the access it carries.

Identity threat detection

Even with everything above in place, a stolen session or an abused account can slip through. Identity threat detection and response, an emerging discipline often shortened to ITDR, watches authenticated activity for the signatures of abuse: impossible travel, a dormant administrator account waking up, a token used from a location it should never appear in. Access governance decides who is allowed to enter. Detection notices when that access is being misused.

> **THE SHIFT**
> Identity has become both a control and a sensor. It is no longer enough to ask whether someone authenticated. You also have to watch what happens after they do.

5. A roadmap, and what to delegate

Identity security is a progression. Very few organizations do all of it at once, and they should not try. The following sequence delivers the largest risk reduction at each step.

- Get every account onto single sign-on with MFA, and retire SMS as a primary factor wherever you can.
- Add conditional, risk-aware access, and trim the standing privileges that accounts do not need.
- Move privileged users, and then everyone, to phishing-resistant methods such as passkeys or hardware keys.
- Add identity threat detection and just-in-time access, so that abuse is caught quickly and the blast radius stays small.

A small team cannot do all of this alone, and it does not need to. The work divides cleanly into what only you can decide and what is better delegated to a partner.

Keep in-house

- The policy. Who gets access to what, which authentication methods are required, and what level of risk is acceptable.
- The directory and the joiner, mover, and leaver process, which only your team can keep accurate as people come and go.
- Business context. Only you know which accounts are sensitive and what happens if one is misused.

Delegate to a partner

- Designing the identity architecture and selecting the right platform for your environment.
- Rolling out phishing-resistant authentication without breaking the way people work day to day.
- Around-the-clock monitoring of identity activity, which a small team cannot staff on its own.

This is the value-added reseller model. EdgeTeam designs the identity architecture, recommends the right platform for your environment without loyalty to any single vendor, and coordinates the managed partner who watches it. You keep the decisions that require knowing your organization. We bring the design and the specialists for everything else.

Conclusion

The perimeter did not disappear. It moved to every login your organization depends on. The good news is that the path forward is well understood and does not require a large team. Put every account behind single sign-on and MFA, climb the ladder toward phishing-resistant methods, give each identity only the access it needs, and watch for the moment a valid login begins acting like an intruder. Done in that order, the gap closes.

The mistake is to treat MFA as the finish line. The attackers moved past it some time ago, and the organizations that recognize this are already rebuilding their defenses around identity.

Next step

EdgeTeam's Security Posture Review includes an identity assessment: a look at how your accounts authenticate today, where the weak factors are, and the fastest path to phishing-resistant access. We will scope it to your environment on the first call.

Request a posture review: edgeteam.com/cybersecurity

Or call the bridge: 1.866.EDGETEAM, available 24/7.

About EdgeTeam Technology

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