

NORTHBRIDGE FINANCIAL CORPORATION

Identity & Access Management

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Date: 2026-02-05

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Executive Summary:

I conducted a security assessment of Northbridge's external IAM posture and identified opportunities to improve both security and operational efficiency. This report includes:

- 1 security vulnerability requiring immediate attention
- 3 operational efficiency opportunities
- A working prototype tool to accelerate user provisioning

CRITICAL FINDING: Username Enumeration Vulnerability

Description:

Northbridge's password reset portal (Microsoft SSPR) disclosed whether email addresses exist in the system by displaying different error messages for valid vs. invalid usernames.

Evidence:

Microsoft

Get back into your account

Who are you?

To recover your account, begin by entering your email or username and the characters in the picture or audio below.

Email or Username: *

Example: user@contoso.onmicrosoft.com or user@contoso.com

The email or username you entered does not exist. Please check that you have typed your email or username correctly.



"The email or username you entered does not exist."

Risk Level: MEDIUM-HIGH

Business Impact:

- Attackers can validate employee email addresses
- Enables targeted phishing campaigns
- Creates a reconnaissance pathway for social engineering
- Violates OWASP Authentication best practices

Compliance Impact:

For insurance companies handling sensitive policyholder data, username enumeration can facilitate:

- Regulatory violations if breached data includes PII
- Failed audit findings under SOC 2 CC6.1 (Logical Access)
- Potential GLBA (Gramm-Leach-Bliley Act) compliance issues

Recommendation:

Configure Microsoft SSPR to display generic messages:

"If an account exists with this email, we've sent password reset instructions."

Implementation: 15-30 minutes via Azure Portal > Entra ID > Password Reset > Customization

Priority: Address within 30 days

CHALLENGE 1: Manual Provisioning Across a Distributed Environment

Current State:

- 7 office locations across Canada
- Multi-Cloud infrastructure (Azure, AWS, GCP)
- Hybrid identity (On-prem AD + Entra ID)
- Privileged access management (CyberArk)
- Endpoint management (Jamf for Mac, SSCM for Windows)

Based on the job requirements and tech stack, I estimate each new hire requires:

- Entra ID account creation: 10 min
- On-prem AD accounts creation: 10 min
- Group assignments (by office/department): 15 min
- ServiceNow ticket documentation: 10 min
- CyberArk access (if applicable): 20 min
- Legacy application accounts: 15-30 min per app

Total: 80-120 minutes per new hire (manual process)

Industry benchmark for automated provisioning: 5-10 minutes

CHALLENGE 2: Joiner/Leaver/Mover Lifecycle Complexity

Insurance Industry Context:

- Seasonal adjusters (high onboarding/offboarding)
- Broker turnover rates: 15-20% annually
- M&A activity requiring bulk user migrations
- Contractors/temporary workers needing time-limited access

Current SLA Risk:

Job description emphasizes “timely fashion while adhering to strict SLAs” > Manual processes are causing SLA misses

Security Risk:

Delayed offboarding = orphaned accounts with active access to

- Policyholder PII
- Claims data
- Financial systems

CHALLENGE 3: ServiceNow Ticket Bottleneck

Every access request requires:

1. ServiceNow ticket creation
2. Manual queue management
3. Technician assignment
4. Manual provisioning
5. Ticket closure/documentation

For a 2,000-employee organization with 15% annual turnover + contractors:

- ~330 new hires/year
- ~300 terminations/year
- ~400 role changes/year
- = 1,000+ IAM tickets annually

At 90 min average per ticket = 1,500 hours/year of manual work

QUICK WIN #1: Fix Username Enumeration (Immediate)

Effort: 30 minutes

Impact: Reduces attack surfaces, improves compliance posture

QUICK WIN #2: Standardize Naming Conventions (30 days)

Observed pattern: firstname.lastname@nbfc.com

Documentation: Document and enforce via automation

Effort: 2-4 hours to audit and standardize

Impact: Reduces provisioning errors, improves consistency

QUICK WIN3: Template-Based Provisioning (60 days)

Create role-based templates:

- “Claims Adjuster - Toronto Office”
- “Underwriter - Vancouver Office”
- “Broker - Calgary Office”

Each template includes:

- Required Entra ID groups
- Application access
- CyberArk vault permissions (if applicable)
- Office-specific resources

Effort: 8-12 hours to build templates

Impact: Reduces provisioning time by 40-50%

AUTOMATION OPPORTUNITY: Onboarding Accelerator Tool

I built a prototype (see attached demo) that:

- ✓ Reads CSV of new hires (from HR system)
- ✓ Creates Entra ID users with proper naming convention
- ✓ Assigns groups based on office location + department
- ✓ Generates ServiceNow-compatible ticket summary
- ✓ Logs all actions for audit trails
- ✓ Validates inputs before execution

ROI Calculation:

Current: 90 min per new hire x 300 new hires = 450 hours/year

With automation: 10 min per new hire x 300 = 50 hours/year

TIME SAVED: 400 hours annually (~\$20,000 in labor costs)

Additional benefits:

- Reduced SLA violations
- Improves new hire experience
- Ensures consistent provisioning
- Creates an audit trail automatically

If I joined Northbridge as a Junior IAM Analyst, here's how I'd approach the first 90 days:

DAYS 1-30: ASSESS & LEARN

- Shadow current provisioning workflows
- Document time spent on each task type
- Map all systems requiring access (create master list)
- Measure current SLA compliance rate
- Identify the top 5 manual pain points
- Build relationships with the ServiceNow team, HR, and regional IT contacts
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DAYS 31-60: OPTIMIZE & STANDARDIZE

- Implement username enumeration fix
- Create role-based provisioning templates
- Document standard operating procedures
- Identify automation candidates (low-hanging fruit)
- Begin ServiceNow workflow optimization
- Establish metrics dashboard (provisioning time, SLA compliance, ticket volume)

DAYS 61-90: AUTOMATE & SCALE

- Deploy onboarding automation for pilot group (one office)
- Measure results vs baseline
- Iterate based on feedback
- Expand to additional offices
- Train team on new tools/processes
- Present results to leadership with ROI metrics

KEY METRICS TO TRACK:

- Average provisioning time (target: <15 min)
- SLA compliance rate (target: >95%)
- Offboarding completion time (target: <4 hours)
- Ticket volume reduction (target: 30% decrease)
- User satisfaction scores