CHG0030011 — [TITAN] Critical — security on nsg-titan-webtier

Severity	Critical	Priority	1 - Critical
Cloud	Azure	State	New
Resource	nsg-titan-webtier	Group	network_operations
Resource type	Microsoft.Network/networkSecurityGroups	Change type	Normal
Opened	2026-04-21 15:26:56	Closed	2026-04-21 15:26:56
CAB required	Yes	Close code	—

Security Finding

```
NSG rule 'AllowSSHAll' permits SSH (port 22) inbound from 0.0.0.0/0 — publicly accessible firewall opening. Every VM in this subnet is exposed to internet-wide SSH brute-force. CIS_AZURE_6.2 violation.
```

Justification

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Severity assessment: CRITICAL — active exploit path, 0-day or internet-exposed asset. Meets ITIL 'security emergency' threshold.
Regulatory driver: CIS obligation.
Risk if deferred: Per industry telemetry, mean time to exploit a publicly-reachable misconfiguration of this class is measured in hours. Delaying this change extends exposure window and increases breach cost per IBM Cost of a Data Breach Report (avg $4.45M per incident).

Detected by: TITAN AI agent unknown (scan titan-killer-20260421T222654Z).
Finding: NSG rule 'AllowSSHAll' permits SSH (port 22) inbound from 0.0.0.0/0 — publicly accessible firewall opening. Every VM in this subnet is exposed to internet-wide SSH brute-force. CIS_AZURE_6.2 violation.
```

Implementation Plan

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1. PRE-CHANGE VERIFICATION (5 min)
- Confirm TITAN pre-scan snapshot captured; snapshot ID in work notes.
- Confirm no blocking dependencies (check 'Affected CIs' below).
- Announce change start in #ops-change Slack channel.

2. APPLY FIX (primary command, auto-generated by TITAN):
az network nsg rule update --name AllowSSHAll --nsg-name nsg-titan-webtier --resource-group rg-titan-demo --source-address-prefixes VirtualNetwork --access Deny

3. POST-CHANGE VERIFICATION (5 min)
- Re-run TITAN targeted scan on the affected resource.
- Confirm finding cleared (scan returns 0 matches for this finding_id).
- Smoke-test dependent applications (see Test plan).

4. CLOSE
- Update ticket state to Review -> Closed.
- Attach scan-diff evidence (pre vs post).
- If verification fails at step 3, execute Backout plan immediately.
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Risk & Impact Analysis

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Change risk level: HIGH (change risk: severity overrides defer-ability)

Blast radius: The change is scoped to a single cloud resource (NSG rule 'AllowSSHAll' permits SSH
(port 22) inbound from 0.0.0.0/0 — publicly a...). Downstream dependencies (if any) are listed
under 'Affected CIs'.

Applying this fix during business hours is acceptable given exploit exposure.

Worst-case failure mode: Change is rejected by the cloud API (network partition or permission
drift). Impact: no state change on target resource; Backout plan is a no-op. Time to detect:
immediate (non-zero exit code from fix command).

Residual risk after successful fix: zero — the finding no longer exists. TITAN verifies this via
post-change scan (see Implementation plan step 3).
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Backout / Rollback Plan

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If post-change verification fails or the fix causes a service disruption:

1. IMMEDIATE: Revert the resource to its pre-change state using the TITAN pre-scan snapshot
(snapshot ID recorded in work notes at scan time).
2. Azure: az <resource-type> update ... (inverse of the apply command) OR az deployment group
create --template-uri <pre-change ARM URI>
3. AWS: aws <service> ... (restore from snapshot or inverse IAM policy)
4. GCP: gcloud <service> ... update --rollback
5. Confirm rollback succeeded by re-running TITAN scan — the original finding should reappear
(confirming the state was fully reverted).
6. Document the failure mode in 'Close notes' for the post-incident review.
7. Re-open this change with 'Rejected' disposition and spawn a parent Problem ticket for
root-cause analysis.
```

Test Plan

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Acceptance criteria (must all PASS to close this change):

[ ] TITAN targeted re-scan of NSG rule 'AllowSSHAll' permits SSH (port 22) inbound from 0....
returns ZERO matches for this finding_id.
[ ] Resource remains in provisioning_state=Succeeded (Azure) / available (AWS) / RUNNING (GCP)
immediately after change.
[ ] Dependent applications pass smoke tests (HTTP 200 on health endpoints, auth still works for
service accounts, DB connection-strings unchanged).
[ ] No new alerts raised in Azure Monitor / CloudWatch / Cloud Monitoring in the 30 minutes
following the change.
[ ] Audit chain entry written: agent.change.applied event with pre/post hashes.

Any FAIL triggers the Backout plan above. Evidence attached to 'Closure Information' tab.
```

Recommended Fix Command

```
az network nsg rule update --name AllowSSHAll --nsg-name nsg-titan-webtier --resource-group
rg-titan-demo --source-address-prefixes VirtualNetwork --access Deny
```

Compliance Mapping

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CIS 1.x IAM, NIST AC-2, SOC 2 CC6.1, CIS Azure 6.2
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AI Close Notes

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(empty)
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