# **Network Traffic Security Analysis Report**

## **Overall Threat Assessment**

Threat Level: 4/10

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## **Executive Summary**

Network Traffic Analysis Security ReportExecutive Summary

Two instances of **TCP connect scan activity** detected from internal IP 10.7.5.101 to external IPs (64.185.227.156 and 162.241.169.155).

No direct attack packets (TCP/UDP/ICMP/ARP) observed in the analyzed traffic sample.

Evidence suggests potential network reconnaissance activity targeting external systems.

Risk Assessment

#### **Critical TCP Scan Patterns:**

**High severity**: Repeated SYN flag usage with window sizes >1024 (indicates potential evasion attempt of legacy IDS systems)

**Internal host at risk**: Source IP 10.7.5.101 shows suspicious outbound behavior suggesting possible compromise

#### **External Targeting Risk:**

Connections to non-standard IPs (64.185.227.156 and 162.241.169.155) require verification of business purpose

**Threat Observations** 

#### Scan Characteristics:

Both detections (packets #3 and #26) occurred within 3 seconds (19:57:27 - 19:57:30 UTC)
Consistent use of TCP protocol with SYN flag manipulation
Abnormal window size configuration (exceeding 1024 bytes) to bypass basic detection mechanisms

#### **Operational Context:**

Source port/destination port data missing - **limits pattern analysis**No payload data provided - unable to confirm scan objectives
All detections originated from internal network space (10.7.5.0/24)

Recommendations

#### **Immediate Containment:**

**Quarantine host 10.7.5.101** for forensic analysis Block outbound connections to detected external IPs at firewall level

#### **Network Hardening:**

Implement TCP window size normalization on border firewalls
Update IDS/IPS signatures to detect SYN scans with window sizes >1024

#### **Investigation Priorities:**

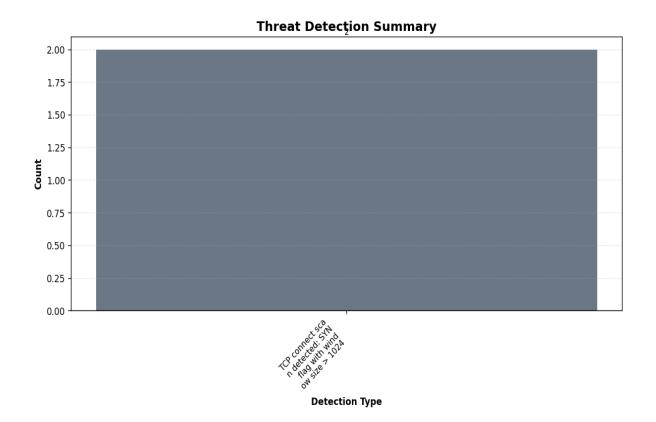
Review DNS logs for domain resolution patterns from 10.7.5.101 Conduct endpoint analysis of source device for rootkits/C2 tools

Validate business justification for communication with external IPs

### **Preventive Controls:**

Deploy network segmentation for critical internal subnets Enable egress filtering with explicit allow-list policies Implement continuous monitoring for SYN flood patterns from internal hosts

# **Threat Detection Summary**



### **Detection Details**

Detection Type	Count
TCP connect scan detected: SYN flag with window size > 1024	2

# Source/Destination Analysis

IP Address	As Source	As Destination	Total
10.7.5.101	2	0	2
64.185.227.156	0	1	1
162.241.169.155	0	1	1

## **Event Timeline**

Time	Packet #	Protocol	Detection
19:57:27.313	3	TCP	TCP connect scan detected: SYN slag with window size > 1024
19:57:30.359	26	TCP	TCP connect scan detected: SYN slag with window size > 1024

## **Appendix: Raw Traffic Analysis Data**

```
"detection_counts": {
 "TCP connect scan detected: SYN flag with window size > 1024": 2
"attack_stats": {
  "tcp_packets": 0,
  "udp_packets": 0,
  "icmp_packets": 0,
  "arp_packets": 0
},
"top_threats": [
    "packet_number": 3,
    "timestamp": "2023-07-05T19:57:27.313166",
    "minute": "2023-07-05 19:57",
    "protocols": [
      "TCP"
   "src_ip": "10.7.5.101",
   "dst_ip": "64.185.227.156",
   "src_port": null,
   "dst_port": null,
    "detection_details": [
      "TCP connect scan detected: SYN flag with window size > 1024"
    "packet_number": 26,
   "timestamp": "2023-07-05T19:57:30.359542",
   "minute": "2023-07-05 19:57",
   "protocols": [
     "TCP"
   ],
    "src_ip": "10.7.5.101",
    "dst_ip": "162.241.169.155",
    "src_port": null,
    "dst_port": null,
    "detection_details": [
      "TCP connect scan detected: SYN flag with window size > 1024"
  }
]
```

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