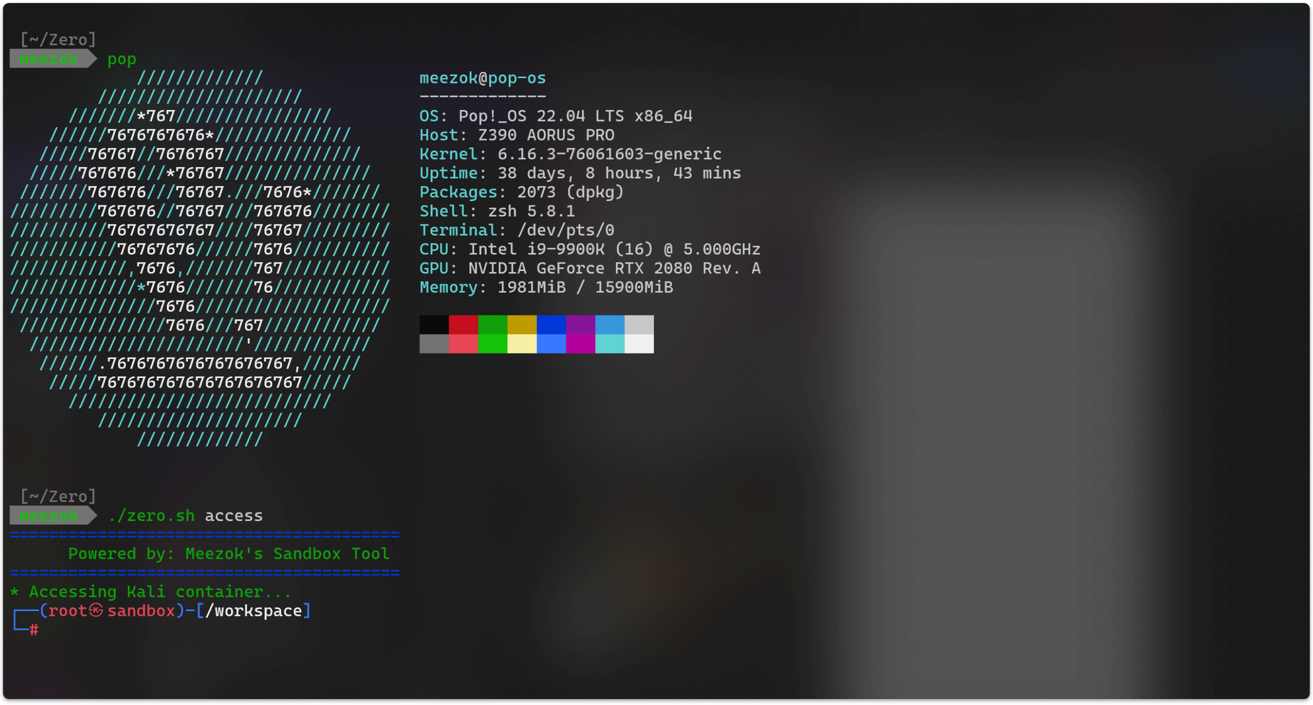
Note the Agent-zero generate Report in `Markdown file + json format` not pdf use apps that support markdown format example: obsidian , Zettlre & notion then u copy context or load the file

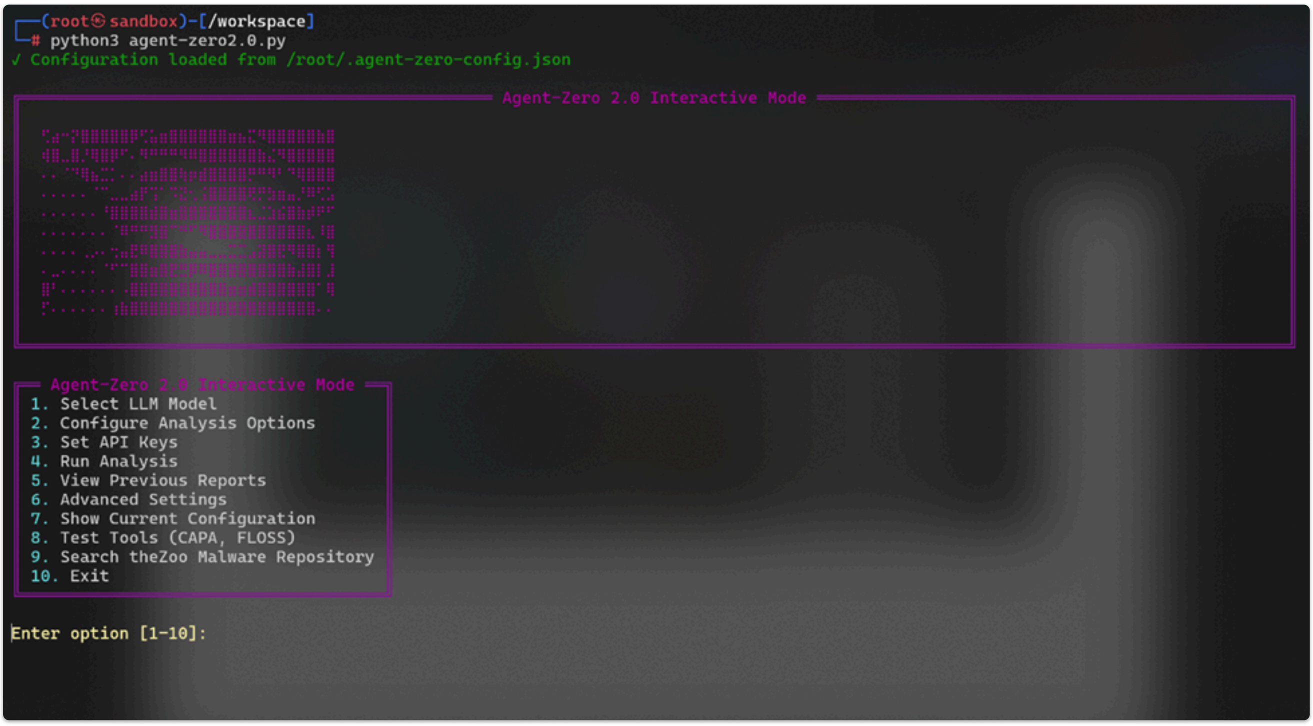
- The Hardware Running on the system to support the LLM



```
[~/Zero]
 meezok  pop
             /////////////                meezok@pop-os
         /////////////////////            -------------
      ///////*767////////////////         OS: Pop!_OS 22.04 LTS x86_64
    //////7676767676*//////////////       Host: Z390 AORUS PRO
   /////76767//7676767//////////////      Kernel: 6.16.3-76061603-generic
  /////767676///*76767///////////////     Uptime: 38 days, 8 hours, 43 mins
 ///////767676///76767.///7676*///////    Packages: 2073 (dpkg)
/////////767676//76767///767676////////   Shell: zsh 5.8.1
//////////76767676767////76767/////////   Terminal: /dev/pts/0
///////////76767676//////7676//////////   CPU: Intel i9-9900K (16) @ 5.000GHz
////////////,7676,///////767///////////   GPU: NVIDIA GeForce RTX 2080 Rev. A
/////////////*7676///////76////////////   Memory: 1981MiB / 15900MiB
///////////////7676////////////////////
 ///////////////7676///767////////////
  //////////////////////'////////////
   //////.7676767676767676767,//////
    /////767676767676767676767/////
      ///////////////////////////
         /////////////////////
             /////////////


[~/Zero]
 meezok  ./zero.sh access
========================================
      Powered by: Meezok's Sandbox Tool
========================================
* Accessing Kali container...
┌──(root㉿sandbox)-[/workspace]
└─#
```

- the Terminal UI



```
┌──(root㉿sandbox)-[/workspace]
└─# python3 agent-zero2.0.py
✓ Configuration loaded from /root/.agent-zero-config.json

═════════════════ Agent-Zero 2.0 Interactive Mode ═════════════════


 Agent-Zero 2.0 Interactive Mode
 1. Select LLM Model
 2. Configure Analysis Options
 3. Set API Keys
 4. Run Analysis
 5. View Previous Reports
 6. Advanced Settings
 7. Show Current Configuration
 8. Test Tools (CAPA, FLOSS)
 9. Search theZoo Malware Repository
 10. Exit

Enter option [1-10]:
```

Binary Analysis Report

File Information

- **File**: `./win32.exe`
- **Analysis Time**: 20251128T194040
- **SHA256**: 9d88425e266b3a74045186837fbd71de657b47d11efefcf8b3cd185a884b5306

Stage Reports

Stage 1

```
{
  "stage": "string_extraction_and_floss",
  "quality_assessment": "good",
  "total_strings": 206,
  "extraction_method": "python+floss",
  "floss_findings": [
    "FLOSS identified 268 static strings, suggesting potential obfuscation or embedded resources.",
    "Decoded strings were extracted, indicating possible encryption or encoding within the binary."
  ],
  "key_observations": [
    "The presence of 'language_strings_missed' suggests a potential issue with language string extraction or a deliberate attempt to avoid detection.",
    "The string length distribution shows a large number of short strings, which is common in malware and packed executables.",
    "FLOSS version information is unavailable, limiting the ability to fully assess its capabilities and potential biases."
  ],
  "potential_indicators": [
    "Strings like 'ZwAllocateVirtualMemory' and 'ExAllocatePool' are API calls related to memory management, potentially indicating dynamic code loading or exploitation.",
    "The presence of strings with unusual characters (e.g., 'Rj$P', '_^u&') could be remnants of obfuscation or custom encoding schemes."
  ],
  "deobfuscated_strings_of_interest": [
    "!This program cannot be run in DOS mode.",
    "Rich",
    "h.rdata"
  ],
  "recommendation": "proceed"
}
```

Stage 2

```
{
  "stage": "categorization_and_capa",
  "categorization_quality": "fair",
  "suspicious_api_count": 11,
  "network_indicators_count": 8,
  "key_api_categories": [],
  "notable_strings": [
    "ZwAllocateVirtualMemory",
    "ExAllocatePool",
    "KfReleaseSpinLock"
  ],
  "capa_attack_techniques_count": 6,
  "capa_mbc_behaviors_count": 11,
  "capa_key_findings": [
    "Shared Modules",
    "Obfuscated Files or Information",
    "Query Registry",
    "Process Discovery"
  ],
  "capa_top_ttps": [
    "T1055",
    "T1071"
  ],
  "initial_risk_level": "medium",
  "recommendation": "proceed_to_reputation_check"
}
```

Stage 3

```
{
  "stage": "threat_intelligence",
  "vt_detection_count": 63,
  "vt_total_engines": 72,
  "capa_attack_techniques_count": 6,
  "capa_mbc_behaviors_count": 11,
  "combined_threat_score": 95,
  "dataset_matches_count": 0,
  "behavioral_patterns_matched": [],
  "dynamic_analysis_verdict": "unknown",
  "dynamic_analysis_source": "None",
  "reputation_summary": "malicious",
  "confidence": 0.98,
  "key_evidence": [
    "VirusTotal: 63 engines detected as malicious",
    "VT-Bkav: W32.AIDetectMalware",
    "VT-Lionic: Trojan.Win32.Duqu.tndX",
    "VT-MicroWorld-eScan: Trojan.GenericKD.31198582",
    "VT-ClamAV: Win.Trojan.Duqu-7",
    "VT-CTX: sys.trojan.duqu",
    "CAPA: 6 ATT&CK techniques detected"
  ],
  "unified_ttp_list": [
    "T1003",
    "T1055",
    "T1071",
    "T1082",
    "T1016"
  ],
  "recommendation": "proceed_to_final_analysis"
}
```

Stage 4

```
{
  "verdict": "malicious",
  "confidence": 0.95,
  "score": 85,
  "malware_family": "Duqu",
  "primary_capabilities": [
    "Memory management",
    "String obfuscation",
    "Network communication",
    "Rootkit capabilities"
  ],
  "ttp_matches": [
    "T1055",
    "T1071",
    "T1060",
    "T1547"
  ],
  "indicators": [
    "ZwAllocateVirtualMemory",
    "ExAllocatePool",
    "Trojan.Win32.Duqu.tndX",
    "PWS-Duqu!rootkit.a"
  ],
  "explanation": "The file exhibits multiple indicators of malicious activity, including high VirusTotal
detections with labels strongly associated with the Duqu malware family. FLOSS analysis reveals potential
obfuscation and embedded resources. The presence of memory management API calls and a large number of short
strings further supports a malicious assessment.",
  "recommended_actions": [
    "Isolate the file",
    "perform a full system scan",
    "monitor network traffic for suspicious connections",
    "investigate potential data exfiltration."
  ],
  "stage_synthesis": "This file is highly likely to be a variant of the Duqu malware, utilizing string
obfuscation and memory manipulation techniques. Immediate isolation and thorough investigation are required.",
  "artifacts": {},
  "evidence_map": {}
}
```

Final Security Assessment

- Verdict: `malicious`
- Confidence: 0.95
- Risk Score: 85/100
- Malware Family: Duqu

Combined Threat Intelligence (VirusTotal + CAPA)

VirusTotal Results

- Malicious Detections: 63
- Suspicious Detections: 0
- Detection Ratio: 63/72

Top Engine Classifications:

- Bkav: W32.AIDetectMalware
- Lionic: Trojan.Win32.Duqu.tndX
- MicroWorld-eScan: Trojan.GenericKD.31198582
- ClamAV: Win.Trojan.Duqu-7
- CTX: sys.trojan.duqu
- CAT-QuickHeal: Trojan.Ghanarava.1733580133c75f5e
- Skyhigh: PWS-Duqu!rootkit.a
- ALYac: Trojan.Agent.duqu
- Cylance: Unsafe
- VIPRE: Trojan.GenericKD.31198582

CAPA Static Analysis Results

- ATT&CK Techniques Detected: 0
- MBC Behaviors Detected: 0
- Capabilities Identified: 0

CAPA Static Analysis Report (Full Text Output)

Report File: `./output/capa_report_9d88425e.txt`

```
┌─────────────┬─────────────────────────────────────────────────────────────────────────────────────┐
│ md5         │ c9a31ea148232b201fe7cb7db5c75f5e                                                    │
│ sha1        │ b3074b26b346cb76605171ba19616baf821acf66                                            │
│ sha256      │ 9d88425e266b3a74045186837fbd71de657b47d11efefcf8b3cd185a884b5306                    │
│ analysis    │ static                                                                              │
│ os          │ windows                                                                             │
│ format      │ pe                                                                                  │
│ arch        │ i386                                                                                │
│ path        │ /workspace/win32.exe                                                                │
└─────────────┴─────────────────────────────────────────────────────────────────────────────────────┘

┏━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━┳━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━┓
┃ ATT&CK Tactic                    ┃ ATT&CK Technique                                                 ┃
┡━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━╇━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━┩
│ DEFENSE EVASION                  │ Obfuscated Files or Information [T1027]                          │
│ DISCOVERY                        │ Process Discovery [T1057]                                        │
│                                  │ Query Registry [T1012]                                           │
│                                    │ System Information Discovery [T1082]                             │
│ EXECUTION                          │ Shared Modules [T1129]                                           │
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┏━━━━━━━━━━━━━━━━━━━━━━━━┳━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━┓
┃ MBC Objective          ┃ MBC Behavior                                                             ┃
┡━━━━━━━━━━━━━━━━━━━━━━━━╇━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━┩
│ DATA                   │ Encode Data::XOR [C0026.002]                                             │
│ DEFENSE EVASION        │ Obfuscated Files or Information::Encoding-Standard Algorithm [E1027.m02] │
│ DISCOVERY              │ Code Discovery::Enumerate PE Sections [B0046.001]                        │
│                        │ System Information Discovery [E1082]                                     │
│ FILE SYSTEM            │ Get File Attributes [C0049]                                              │
│                        │ Read File [C0051]                                                        │
│ OPERATING SYSTEM       │ Registry::Query Registry Value [C0036.006]                               │
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┏━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━┳━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━┓
┃ Capability                                                   ┃ Namespace                           ┃
┡━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━╇━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━┩
│ encode data using XOR (2 matches)                            │ data-manipulation/encoding/xor      │
│ complete processing asynchronous IO request (2 matches)      │ host-interaction/driver             │
│ create device object (4 matches)                             │ host-interaction/driver             │
│ get file attributes                                          │ host-interaction/file-system/meta   │
│ read file on Windows                                         │ host-interaction/file-system/read   │
│ check OS version (4 matches)                                 │ host-interaction/os/version         │
│ find process by PID (2 matches)                              │ host-interaction/process/list       │
│ query or enumerate registry value                            │ host-interaction/registry           │
│ link function at runtime on Windows                          │ linking/runtime-linking             │
│ enumerate PE sections                                        │ load-code/pe                        │
│ parse PE header                                              │ load-code/pe                        │
└──────────────────────────────────────────────────────────────┴─────────────────────────────────────┘
```

Explanation

The file exhibits multiple indicators of malicious activity, including high VirusTotal detections with labels strongly associated with the Duqu malware family. FLOSS analysis reveals potential obfuscation and embedded resources. The presence of memory management API calls and a large number of short strings further supports a malicious assessment.

Primary Capabilities

- Memory management
- String obfuscation
- Network communication
- Rootkit capabilities

MITRE ATT&CK TTPs (Unified)

- T1055
- T1071
- T1060
- T1547

Indicators

- ZwAllocateVirtualMemory
- ExAllocatePool
- Trojan.Win32.Duqu.tndX
- PWS-Duqu!rootkit.a

Recommended Actions

- Isolate the file
- perform a full system scan

- monitor network traffic for suspicious connections
- investigate potential data exfiltration.

Stage Synthesis

This file is highly likely to be a variant of the Duqu malware, utilizing string obfuscation and memory manipulation techniques. Immediate isolation and thorough investigation are required.