JOHNS HOPKINS
APPLIED PHYSICS LABORATORY

August 2025

LIVING OFF THE LAND REFERENCE INDICATOR OF BEHAVIOR DOCUMENTATION

Prepared by:
The Johns Hopkins University
Applied Physics Laboratory
11100 Johns Hopkins Rd.
Laurel, Maryland 20723-6099

Authors:
Charles Frick, Charles.Frick@jhuapl.edu
Carter Bullard
Luanne Chamberlain
Kurt Karolenko
Jason O'Connor
Hannah Ripley
Ali Shahegh
Tim Zhan

Prepared for: The Cybersecurity and Infrastructure Security Agency
AOS-25-0950

Disclaimer: The views and conclusions contained in this document are those of the author and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Department of Homeland Security / Cybersecurity and Infrastructure Security Agency.

CONTENTS

FIGURES

1. INTRODUCTION

The Johns Hopkins University Applied Physics Laboratory (APL), under sponsorship from the Cybersecurity and Infrastructure Security Agency (CISA), is supporting operational improvements to cyber defense through integration, automation, and standardized information sharing. To this end, APL has prepared an example STIX bundle to represent cyber adversary behaviors—specifically, tactics that rely on "Living off the Land" (LOTL) approaches—using machine-readable Structured Threat Information eXpression (STIX) format.

This report provides an overview of the content and structure of the example bundle, along with guidance to help operational users interpret and apply the information in support of detection, correlation, and automation workflows.

2. BEHAVIOR REPRESENTATION OVERVIEW

The current focus of APL's work in support of cyber adversary behavior representation is the preparation and delivery of machine-readable objects that can express adversary behaviors observed on a target network. This effort builds upon prior activities completed under the Integrated Adaptive Cyber Defense (IACD)[1] framework and other efforts for the Cybersecurity and Infrastructure Security Agency (CISA).

Earlier work established an approach for representing adversary behavior using custom object types defined within the STIX 2.1 standard. In this update, APL provides a structured content bundle intended for community sharing and integration into automated and analyst-driven workflows. The resulting STIX bundle enables defenders to detect and respond to observed behavior more effectively by supporting consistent interpretation, correlation, and sharing across operational environments.

2.1 Overview

This section provides a structured summary of the LOTL behavior bundle, formatted using the STIX 2.1 standard with Open Cybersecurity Alliance (OCA) Indicators of Behavior (IOB) extensions. The included behaviors represent a pattern of stealthy, post-compromise activity that involves the use of legitimate tools and credentials—tactics commonly associated with advanced persistent threat (APT) actors such as Volt Typhoon[2].

The content is organized to present an overarching threat narrative, detailed behavioral representations, placeholders for detection rules, and an explanation of the correlation logic used to elevate otherwise low-confidence events into actionable alerts. Sigma rules may be inserted in

[1] https://iacdautomate.org

[2] https://www.cisa.gov/sites/default/files/2024-03/aa24-038a_csa_prc_state_sponsored_actors_compromise_us_critical_infrastructure_3.pdf

the designated areas, and optional workflow illustrations can be included to support visualization of the correlation scoring mechanism.

2.2 Threat Narrative

The behaviors described in this bundle represent steps an adversary may take once initial access has been established on a target network. Rather than relying on malware or noisy exploit chains, the attacker uses legitimate administrative tools—particularly PowerShell, Windows Remote Management (WinRM), and registry or file system access—to enumerate systems, harvest credentials, and move laterally while avoiding traditional signature-based detection.

The sequence begins with reconnaissance, followed by credential access via memory dumping and file extraction, and concludes with log removal to hinder forensic recovery. These behaviors mirror previously reported Volt Typhoon tradecraft and are typical of campaigns aiming for long-term persistence and operational secrecy within critical infrastructure environments.

2.3 Behaviors and Detections Within the Example

This section provides detailed descriptions of five key behaviors associated with the Living Off the Land campaign. Each behavior includes a summary of the observed activity, its mapping to the MITRE ATT&CK framework, and the corresponding detection rule expressed in Sigma format. The behaviors are:

- Dumping hashes from Local Security Authority Subsystem Service (LSASS) memory
- Loading the PowerView reconnaissance module
- Extracting the NT Directory Services (NTDS) Active Directory database
- Deleting Windows event logs
- Executing commands via Windows Remote Shell (WinRS)

These behaviors reflect common post-compromise techniques used by advanced threat actors to evade detection, escalate privileges, and maintain persistence.

2.3.1 Dumping Hashes from LSASS Memory

Computer Generating Hashes from LSASS describes the use of a process to dump memory from the LSASS process in order to extract password hashes or plaintext credentials. This behavior maps to ATT&CK technique **T1003.001 – OS Credential Dumping: LSASS Memory**.

Detection logic focuses on identifying suspicious memory dump activity targeting the lsass.exe process, especially using tools such as procdump.exe, comsvcs.dll, or WerFault.exe. Relevant process creation and command-line patterns in Windows event logs and Sysmon telemetry can be used to flag this behavior. It is detected with the following Sigma rule:

```
title: Computer generating hashes
```

```
id: 1C2B0F31-64F3-4B4A-A0F6-CCFDFF2E98CD
status: experimental
description: Process causing computer to dump hashes with lsass
references: https://attack.mitre.org/techniques/T1003/001/
author: OCA
date: 2024/10/21
modified: 2024/10/21
tags:
    - attack.t1033.001
    - attack.execution
logsource:
    category: process_creation
    product: windows
detection:
    selection_1:
        event.code: 8
    selection_2:
        winlog.event_data.TargetImage: '*lsass*'
    condition: selection_1 and selection_2
falsepositives:
    - Legitimate lsass usage
level: high
```

2.3.2 Loading the PowerView Reconnaissance Module

Load PowerView Recon Module describes the loading of PowerSploit's PowerView module, a PowerShell-based tool used for Active Directory enumeration and reconnaissance. This behavior maps to ATT&CK technique **T1059.001 – Command and Scripting Interpreter: PowerShell**.

Detection focuses on specific PowerShell commands such as Get-Domain*, which are commonly used in enumeration activity, and script block logs that reveal indicators of PowerView usage. These detections are effective when script logging is enabled and correlated with known patterns of domain discovery. It is detected with the following Sigma rule:

```
title: Command and Scripting Interpreter - PowerShell Powersploit
id: t42kn5m8-9v7r-5102-3841-p3j1r26b90w2
status: experimental
description: Powersploit usage to enumerate network
references: https://attack.mitre.org/techniques/T1059/001/
author: OCA
date: 2024/10/17
modified: 2024/10/17
tags:
    - attack.t1059.001
    - attack.execution
logsource:
    category: process_creation
    product: windows
detection:
    selection_1:
        event.code: 4104
    selection_2:
        winlog.event_data.ScriptBlockText: '*Get-DomainComputer*'
    selection_3:
        winlog.event_data.ScriptBlockText: '*Get-NetComputer*'
    condition: selection_1 and selection_2 and selection_3
falsepositives:
    - Legitimate powershell scripts
level: high
```

2.3.3 Extracting the NTDS Active Directory Database

Extract NTDS File describes an adversary copying the ntds.dit file, which contains Active Directory user credentials and directory structure data, often for offline password cracking or privilege escalation. This behavior maps to ATT&CK technique **T1555 – Credentials from Password Stores.**

Detection logic involves monitoring access to ntds.dit, the use of Volume Shadow Copy or similar methods, and file transfer attempts from domain controllers. Indicators such as "event.code: 325" and file creation events referencing ntds.dit are relevant. It is detected with the following Sigma rule:

```
title: Credentials from Password Stores
id: q34np6k7-2m9r-7501-1842-x1v1j57b09t3
status: experimental
description: credentials sought to perform lateral movement and access restricted information privileges
references: hhttps://attack.mitre.org/techniques/T1555/
author: OCA
date: 2024/10/23
modified: 2024/10/23
tags:
    - attack.t1555
    - attack.credential_access
logsource:
    category: process_creation
    product: windows
detection:
    selection:
        event.code: 325
        message: '*ntds.dit*'
    condition: selection
falsepositives:
    - legitimate token
level: high
```

2.3.4 Deleting Windows Event Logs

Log Deletion describes the clearing of Windows Event Logs in order to remove traces of the attacker's presence and evade forensic investigation. This behavior maps to ATT&CK technique **T1070.001 – Indicator Removal: Clear Windows Event Logs.**

Detection strategies look for the execution of tools like wevtutil, the Clear-EventLog PowerShell cmdlet, or direct access to .evtx files. The activity may also involve privilege escalation and typically occurs shortly after other malicious actions. It is detected with the following Sigma rule:

```
title: Indicator Removal - Clear Windows Event Logs
id: m58kp2j4-7v3h-9102-6521-p4b1n39t06d1
status: experimental
description: Windows Event Logs cleared to hide the activity of an intrusion
references: https://attack.mitre.org/techniques/T1070/001/
author: OCA
date: 2024/10/23
modified: 2024/10/23
tags:
    - attack.t1070.001
    - attack.defense_evasion
```

```
logsource:
    category: process_creation
    product: windows
detection:
    selection_1:
        event.code: 1
    selection_2:
        winlog.event_data.CommandLine.keyword: ”*wevtutil*"
    selection_3:
        winlog.event_data.CommandLine.keyword: "*cl*"
    condition: all of selection_*
falsepositives:
    - legitimate administrator activity
level: high
```

2.3.5 Executing Commands via Windows Remote Shell (WinRS)

Winrs Running Commands describes the use of WinRS to execute commands on remote systems, enabling lateral movement using valid credentials. This behavior maps to ATT&CK technique **T1021.006 – Remote Services: Windows Remote Management.**

Detection involves identifying the use of winrs in command lines, particularly across hosts, and correlating this with credential reuse and administrative user activity. Remote execution events and child processes spawned remotely are key indicators. It is detected with the following Sigma rule:

```
title: Winrs running commands
id: 215bc1ed-cf6b-4af8-8fbe-979aeca97c6d
status: experimental
description: This detection looks for winrshost.exe running commands with cmd.exe or powershell
references: https://attack.mitre.org/techniques/T1021/006/
author: JHUAPL
date: 2025/03/06
modified: 2025/03/06
tags:
    - attack.t1021.006
    - attack.execution
logsource:
    category: process
    product: windows
detection:
    selection_1:
        EventCode: 4688
    selection_2:
        parent_process_name: "winrshost.exe"
    selection_3:
        process_name:
            - "cmd.exe"
            - "*powershell*"
    condition: selection_1 and selection_2 and selection_3
falsepositives:
    - legitimate administrator activity
level: high
```

2.4 Correlation Logic

The behavioral indicators in this bundle are not intended to be evaluated in isolation. Instead, they are meant to be correlated to raise confidence in detecting adversary operations. To support this, the bundle includes a correlation workflow that is modeled using a course-of-action object titled Correlate and Score Behaviors, which references an associated x-oca-playbook object. This playbook is provided in two interoperable formats: CACAO (Collaborative Automated Course of Action Operations) for automation in threat response platforms, and BPMN (Business Process Model and Notation) for visualizing and understanding the logic as a workflow diagram.

The playbook defines a scoring mechanism in which each behavior, when detected, adds to a cumulative score associated with a host or user session. The scoring model also incorporates temporal thresholds—behaviors must occur within a defined window to be considered correlated—and evaluates contextual information such as whether the actions were taken by privileged users or from high-value systems. Once a defined score threshold is exceeded, the playbook triggers an alert, representing a higher-confidence detection than any single behavior alone would provide.

This approach allows analysts or automated systems to move beyond signature-based or one-off detections and instead recognize attack progression through weak signals that form a meaningful pattern when combined. The inclusion of both CACAO and BPMN formats ensures compatibility with orchestration platforms and supports transparency and analyst review through visual representation.

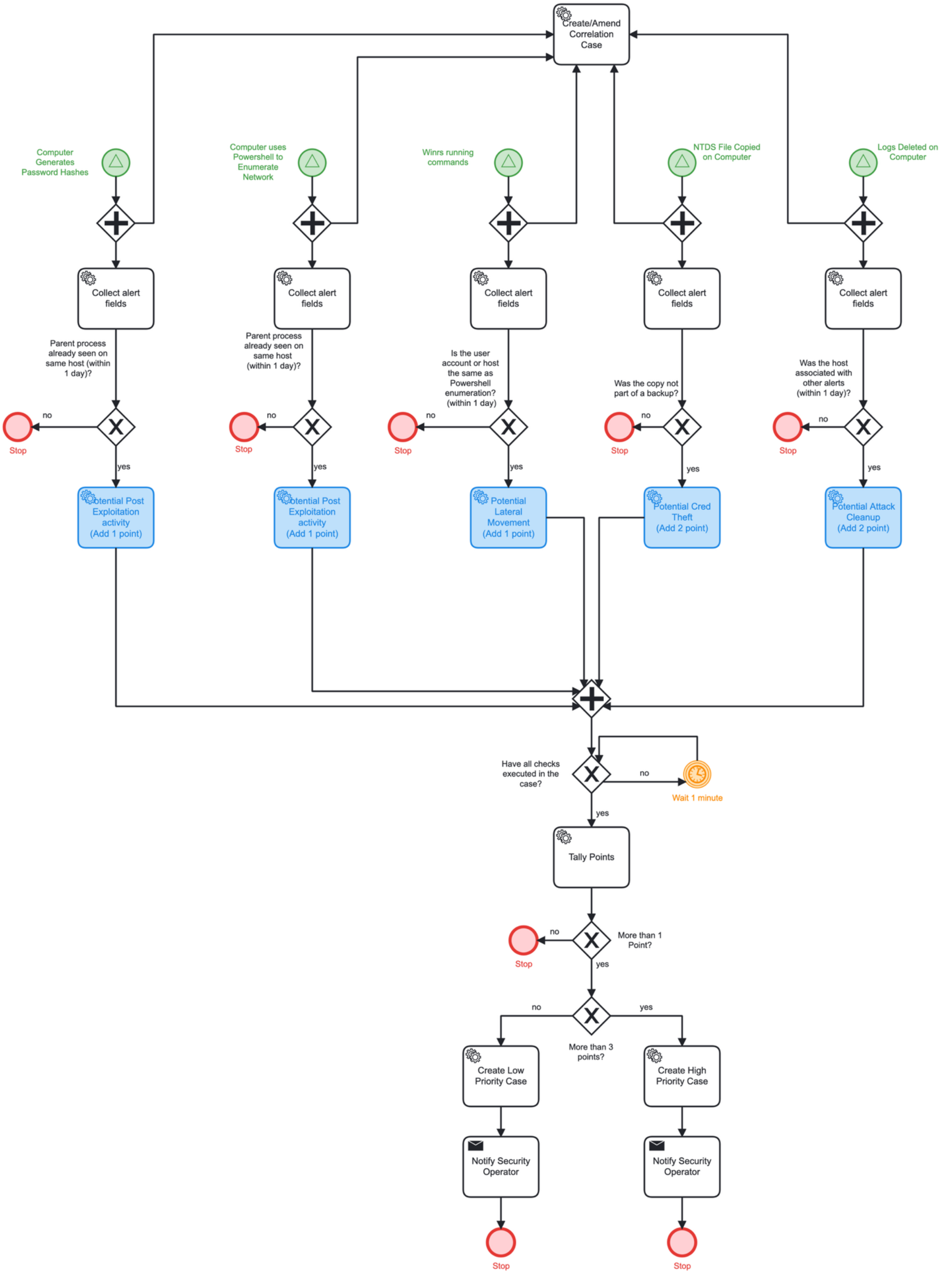
Create/Amend Correlation Case
Computer Generates Password Hashes
Computer uses Powershell to Enumerate Network
Winrs running commands
NTDS File Copied on Computer
Logs Deleted on Computer
Collect alert fields
Collect alert fields
Collect alert fields
Collect alert fields
Collect alert fields
Parent process already seen on same host (within 1 day)?
Parent process already seen on same host (within 1 day)?
Is the user account or host the same as Powershell enumeration? (within 1 day)
Was the copy not part of a backup?
Was the host associated with other alerts (within 1 day)?
no
Stop
yes
no
Stop
yes
no
Stop
yes
no
Stop
yes
no
Stop
yes
Potential Post Exploitation activity (Add 1 point)
Potential Post Exploitation activity (Add 1 point)
Potential Lateral Movement (Add 1 point)
Potential Cred Theft (Add 2 point)
Potential Attack Cleanup (Add 2 point)
Have all checks executed in the case?
no
Wait 1 minute
yes
Tally Points
no
Stop
More than 1 Point?
yes
no
yes
More than 3 points?
Create Low Priority Case
Create High Priority Case
Notify Security Operator
Notify Security Operator
Stop
Stop

Figure 1 BPMN Representation of Correlation Logic

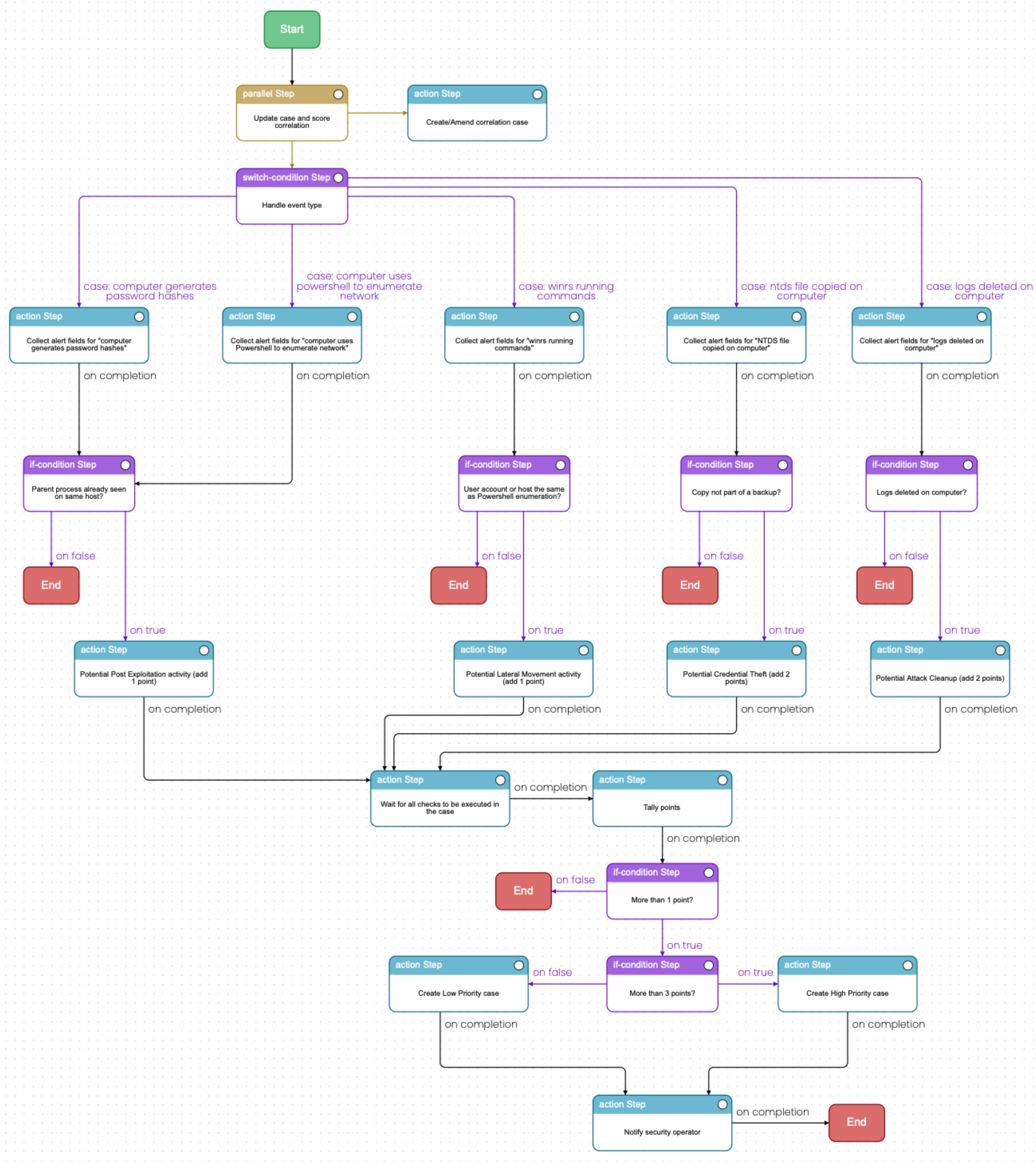
Start
parallel Step
Update case and score correlation
action Step
Create/Amend correlation case
switch-condition Step
Handle event type
case: computer generates password hashes
case: computer uses powershell to enumerate network
case: winrs running commands
case: ntds file copied on computer
case: logs deleted on computer
action Step
Collect alert fields for "computer generates password hashes"
action Step
Collect alert fields for "computer uses Powershell to enumerate network"
action Step
Collect alert fields for "winrs running commands"
action Step
Collect alert fields for "NTDS file copied on computer"
action Step
Collect alert fields for "logs deleted on computer"
on completion
on completion
on completion
on completion
on completion
if-condition Step
Parent process already seen on same host?
if-condition Step
User account or host the same as Powershell enumeration?
if-condition Step
Copy not part of a backup?
if-condition Step
Logs deleted on computer?
on false
End
on false
End
on false
End
on false
End
on true
on true
on true
on true
action Step
Potential Post Exploitation activity (add 1 point)
action Step
Potential Lateral Movement activity (add 1 point)
action Step
Potential Credential Theft (add 2 points)
action Step
Potential Attack Cleanup (add 2 points)
on completion
on completion
on completion
on completion
action Step
Wait for all checks to be executed in the case
on completion
action Step
Tally points
on completion
if-condition Step
More than 1 point?
on false
End
on true
if-condition Step
More than 3 points?
on false
action Step
Create Low Priority case
on true
action Step
Create High Priority case
on completion
on completion
action Step
Notify security operator
on completion
End

Figure 2 CACAO Representation of Correlation Logic

3. ACKNOWLEDGEMENT

The IOB Sub-Project wishes to thank Dr. Vasileios Mavroeidis and his teams at University of Oslo / Cyentific AS for their technical discussions on best practices to represent CACAO playbooks within STIX.

4. CONCLUSION

APL provides this IOB example bundle and accompanying report to support consistent representation of adversary behavior using machine-readable formats. The material is intended to assist the cyber defense community with operational integration, improve information sharing, and promote standardization across tools and workflows.

For any questions regarding this report, please contact the authors at Charles.Frick@jhuapl.edu.

5. APPENDIX A: ACRONYMS

Acronym	Definition
APL	Johns Hopkins Applied Physics Laboratory
APT	Advanced Persistent Threat
ATT&CK	Adversarial Tactics, Techniques, and Common Knowledge
BPMN	Business Process Model and Notation
CACAO	Collaborative Automated Course of Action Operations
CISA	Cybersecurity and Infrastructure Security Agency
COA	Course of Action
IOC	Indicator of Compromise
IOB	Indicator of Behavior
LOTL	Living Off the Land
NTDS	NT Directory Services
OCA	Open Cybersecurity Alliance
STIX	Structured Threat Information eXpression
TTP	Tactics, Techniques, and Procedures
WinRM	Windows Remote Management
WinRS	Windows Remote Shell

6. APPENDIX B: COMPLETE BEHAVIOR SET STIX BUNDLE

```
{
  "spec_version": "2.1",
  "id": "bundle--14e1d58f-4c98-42b2-877d-6f5c24fd895d",
  "type": "bundle",
  "objects": [
    {
      "type": "extension-definition",
      "spec_version": "2.1",
      "id": "extension-definition--9c59fd79-4215-4ba2-920d-3e4f320e1e62",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2022-03-31T13:00:00.000Z",
      "modified": "2025-06-18T12:00:00.000Z",
      "name": "x-oca-behavior Extension Definition",
      "description": "Behavior objects define adversary behaviors associated with higher level MITRE
ATT&CK tactics and techniques. The Attack Pattern SDO may have multiple behaviors associated with it. For
example, a spearphishing attack may employ multiple behaviors (usage of email attachments, process
modifying a registry key, network patterns, etc.).",
      "schema": "https://raw.githubusercontent.com/opencybersecurityalliance/stix-
extensions/main/2.x/schemas/x-oca-behavior.json",
      "version": "1.0.1",
      "extension_types": [
        "new-sdo"
      ]
    },
    {
      "type": "extension-definition",
      "spec_version": "2.1",
      "id": "extension-definition--c4690e13-107e-4796-8158-0dcf1ae7bc89",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2022-03-31T13:00:00.000Z",
      "modified": "2025-06-18T12:00:00.000Z",
      "name": "x-oca-detection Extension Definition",
      "description": "Detections contain logic to detect an adversary behavior.",
      "schema": "https://raw.githubusercontent.com/opencybersecurityalliance/stix-
extensions/main/2.x/schemas/x-oca-detection.json",
      "version": "1.0.1",
      "extension_types": [
        "new-sdo"
      ]
    },
    {
      "type": "extension-definition",
      "spec_version": "2.1",
      "id": "extension-definition--5cccba5c-0be4-450c-8672-b66e98515754",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2023-05-01T12:00:00.000Z",
      "modified": "2025-06-18T12:00:00.000Z",
      "name": "x-oca-detector Extension Definition",
      "description": "Detector objects define tools, software, products, etc. that are capable of
performing detection. They should likely be related to one or more Detection obects.",
      "schema": "https://raw.githubusercontent.com/opencybersecurityalliance/stix-
extensions/main/2.x/schemas/x-oca-detector.json",
      "version": "1.0.1",
      "extension_types": [
        "new-sdo"
      ]
    },
    {
      "type": "extension-definition",
      "spec_version": "2.1",
      "id": "extension-definition--809c4d84-7a6e-4039-97b4-da9fea03fcf9",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2022-03-31T13:00:00.000Z",
      "modified": "2025-06-18T12:00:00.000Z",
      "name": "x-oca-playbook Extension Definition",
      "description": "A Playbook object represents a structured process, such as an orchestration
workflow, alongside associated metadata.",
      "schema": "https://raw.githubusercontent.com/opencybersecurityalliance/stix-
extensions/main/2.x/schemas/x-oca-playbook.json",
      "version": "4.0.0",
      "extension_types": [
        "new-sdo"
      ]
    },
    {
      "id": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "type": "identity",
      "spec_version": "2.1",
      "created": "2022-03-31T13:00:00.000Z",
      "modified": "2023-05-23T10:09:00.000Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "name": "OCA"
    },
    {
      "id": "identity--c78cb6e5-0c4b-4611-8297-d1b8b55e40b5",
      "type": "identity",
      "spec_version": "2.1",
      "created_by_ref": "identity--c78cb6e5-0c4b-4611-8297-d1b8b55e40b5",
      "created": "2017-06-01T00:00:00.000Z",
      "modified": "2022-04-25T14:00:00.188Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "object_marking_refs": [
        "marking-definition--fa42a846-8d90-4e51-bc29-71d5b4802168"
      ],
      "name": "The MITRE Corporation",
      "identity_class": "organization"
    },
    {
      "id": "attack-pattern--65f2d882-3f41-4d48-8a06-29af77ec9f90",
      "type": "attack-pattern",
      "spec_version": "2.1",
      "created_by_ref": "identity--c78cb6e5-0c4b-4611-8297-d1b8b55e40b5",
      "created": "2020-02-11T18:41:44.783Z",
      "modified": "2024-08-13T13:52:45.379Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "external_references": [
        {
          "source_name": "mitre-attack",
          "url": "https://attack.mitre.org/techniques/T1003/001",
          "external_id": "T1003.001"
        },
        {
          "source_name": "Medium Detecting Attempts to Steal Passwords from Memory",
          "description": "French, D. (2018, October 2). Detecting Attempts to Steal Passwords from Memory.
Retrieved October 11, 2019.",
          "url": "https://medium.com/threatpunter/detecting-attempts-to-steal-passwords-from-memory-
558f16dce4ea"
        },
        {
          "source_name": "Deep Instinct LSASS",
          "description": "Gilboa, A. (2021, February 16). LSASS Memory Dumps are Stealthier than Ever
Before - Part 2. Retrieved December 27, 2023.",
          "url": "https://www.deepinstinct.com/blog/lsass-memory-dumps-are-stealthier-than-ever-before-
part-2"
        },
        {
          "source_name": "Graeber 2014",
          "description": "Graeber, M. (2014, October). Analysis of Malicious Security Support Provider
DLLs. Retrieved March 1, 2017.",
          "url": "http://docplayer.net/20839173-Analysis-of-malicious-security-support-provider-dlls.html"
        },
        {
          "source_name": "Volexity Exchange Marauder March 2021",
          "description": "Gruzweig, J. et al. (2021, March 2). Operation Exchange Marauder: Active
Exploitation of Multiple Zero-Day Microsoft Exchange Vulnerabilities. Retrieved March 3, 2021.",
          "url": "https://www.volexity.com/blog/2021/03/02/active-exploitation-of-microsoft-exchange-zero-
day-vulnerabilities/"
        },
        {
          "source_name": "Powersploit",
          "description": "PowerSploit. (n.d.). Retrieved December 4, 2014.",
          "url": "https://github.com/mattifestation/PowerSploit"
        },
        {
          "source_name": "Symantec Attacks Against Government Sector",
          "description": "Symantec. (2021, June 10). Attacks Against the Government Sector. Retrieved
September 28, 2021.",
          "url": "https://symantec.broadcom.com/hubfs/Attacks-Against-Government-Sector.pdf"
        },
        {
          "source_name": "TechNet Blogs Credential Protection",
          "description": "Wilson, B. (2016, April 18). The Importance of KB2871997 and KB2928120 for
Credential Protection. Retrieved April 11, 2018.",
          "url": "https://blogs.technet.microsoft.com/askpfeplat/2016/04/18/the-importance-of-kb2871997-
and-kb2928120-for-credential-protection/"
        }
      ],
      "object_marking_refs": [
        "marking-definition--fa42a846-8d90-4e51-bc29-71d5b4802168"
      ],
      "name": "LSASS Memory",
      "description": "Adversaries may attempt to access credential material stored in the process memory
of the Local Security Authority Subsystem Service (LSASS). After a user logs on, the system generates and
stores a variety of credential materials in LSASS process memory. These credential materials can be
harvested by an administrative user or SYSTEM and used to conduct [Lateral
Movement](https://attack.mitre.org/tactics/TA0008) using [Use Alternate Authentication
Material](https://attack.mitre.org/techniques/T1550).\n\nAs well as in-memory techniques, the LSASS
process memory can be dumped from the target host and analyzed on a local system.\n\nFor example, on the
target host use procdump:\n\n* <code>procdump -ma lsass.exe lsass_dump</code>\n\nLocally, mimikatz can be
run using:\n\n* <code>sekurlsa::Minidump lsassdump.dmp</code>\n*
<code>sekurlsa::logonPasswords</code>\n\nBuilt-in Windows tools such as `comsvcs.dll` can also be
used:\n\n* <code>rundll32.exe C:\\Windows\\System32\\comsvcs.dll MiniDump PID  lsass.dmp
full</code>(Citation: Volexity Exchange Marauder March 2021)(Citation: Symantec Attacks Against Government
Sector)\n\nSimilar to [Image File Execution Options
Injection](https://attack.mitre.org/techniques/T1546/012), the silent process exit mechanism can be abused
to create a memory dump of `lsass.exe` through Windows Error Reporting (`WerFault.exe`).(Citation: Deep
Instinct LSASS)\n\nWindows Security Support Provider (SSP) DLLs are loaded into LSASS process at system
start. Once loaded into the LSA, SSP DLLs have access to encrypted and plaintext passwords that are stored
in Windows, such as any logged-on user's Domain password or smart card PINs. The SSP configuration is
stored in two Registry keys: <code>HKLM\\SYSTEM\\CurrentControlSet\\Control\\Lsa\\Security Packages</code>
and <code>HKLM\\SYSTEM\\CurrentControlSet\\Control\\Lsa\\OSConfig\\Security Packages</code>. An adversary
may modify these Registry keys to add new SSPs, which will be loaded the next time the system boots, or
when the AddSecurityPackage Windows API function is called.(Citation: Graeber 2014)\n\nThe following SSPs
can be used to access credentials:\n\n* Msv: Interactive logons, batch logons, and service logons are done
through the MSV authentication package.\n* Wdigest: The Digest Authentication protocol is designed for use
with Hypertext Transfer Protocol (HTTP) and Simple Authentication Security Layer (SASL)
exchanges.(Citation: TechNet Blogs Credential Protection)\n* Kerberos: Preferred for mutual client-server
domain authentication in Windows 2000 and later.\n* CredSSP:  Provides SSO and Network Level
Authentication for Remote Desktop Services.(Citation: TechNet Blogs Credential Protection)\n",
      "kill_chain_phases": [
        {
          "kill_chain_name": "mitre-attack",
          "phase_name": "credential-access"
        }
      ]
```

```
    },
    {
      "id": "attack-pattern--970a3432-3237-47ad-bcca-7d8cbb217736",
      "type": "attack-pattern",
      "spec_version": "2.1",
      "created_by_ref": "identity--c78cb6e5-0c4b-4611-8297-d1b8b55e40b5",
      "created": "2020-03-09T13:48:55.078Z",
      "modified": "2024-10-15T16:39:13.228Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "external_references": [
        {
          "source_name": "mitre-attack",
          "url": "https://attack.mitre.org/techniques/T1059/001",
          "external_id": "T1059.001"
        },
        {
          "source_name": "Microsoft PSfromCsharp APR 2014",
          "description": "Babinec, K. (2014, April 28). Executing PowerShell scripts from C#. Retrieved
April 22, 2019.",
          "url": "https://blogs.msdn.microsoft.com/kebab/2014/04/28/executing-powershell-scripts-from-c/"
        },
        {
          "source_name": "SilentBreak Offensive PS Dec 2015",
          "description": "Christensen, L.. (2015, December 28). The Evolution of Offensive PowerShell
Invocation. Retrieved December 8, 2018.",
          "url": "https://web.archive.org/web/20190508170150/https://silentbreaksecurity.com/powershell-
jobs-without-powershell-exe/"
        },
        {
          "source_name": "FireEye PowerShell Logging 2016",
          "description": "Dunwoody, M. (2016, February 11). GREATER VISIBILITY THROUGH POWERSHELL LOGGING.
Retrieved February 16, 2016.",
          "url": "https://www.fireeye.com/blog/threat-research/2016/02/greater_visibilityt.html"
        },
        {
          "source_name": "Github PSAttack",
          "description": "Haight, J. (2016, April 21). PS>Attack. Retrieved September 27, 2024.",
          "url": "https://github.com/Exploit-install/PSAttack-1"
        },
        {
          "source_name": "inv_ps_attacks",
          "description": "Hastings, M. (2014, July 16). Investigating PowerShell Attacks. Retrieved
December 1, 2021.",
          "url": "https://powershellmagazine.com/2014/07/16/investigating-powershell-attacks/"
        },
        {
          "source_name": "Malware Archaeology PowerShell Cheat Sheet",
          "description": "Malware Archaeology. (2016, June). WINDOWS POWERSHELL LOGGING CHEAT SHEET - Win
7/Win 2008 or later. Retrieved June 24, 2016.",
          "url": "http://www.malwarearchaeology.com/s/Windows-PowerShell-Logging-Cheat-Sheet-ver-June-
2016-v2.pdf"
        },
        {
          "source_name": "TechNet PowerShell",
          "description": "Microsoft. (n.d.). Windows PowerShell Scripting. Retrieved April 28, 2016.",
          "url": "https://technet.microsoft.com/en-us/scriptcenter/dd742419.aspx"
        },
        {
          "source_name": "Sixdub PowerPick Jan 2016",
          "description": "Warner, J.. (2015, January 6). Inexorable PowerShell – A Red Teamer’s Tale of
Overcoming Simple AppLocker Policies. Retrieved December 8, 2018.",
          "url": "https://web.archive.org/web/20160327101330/http://www.sixdub.net/?p=367"
        }
      ],
      "object_marking_refs": [
        "marking-definition--fa42a846-8d90-4e51-bc29-71d5b4802168"
      ],
      "name": "PowerShell",
      "description": "Adversaries may abuse PowerShell commands and scripts for execution. PowerShell is a 
powerful interactive command-line interface and scripting environment included in the Windows operating 
system.(Citation: TechNet PowerShell) Adversaries can use PowerShell to perform a number of actions, 
including discovery of information and execution of code. Examples include the <code>Start-Process</code> 
cmdlet which can be used to run an executable and the <code>Invoke-Command</code> cmdlet which runs a 
command locally or on a remote computer (though administrator permissions are required to use PowerShell 
to connect to remote systems).\n\nPowerShell may also be used to download and run executables from the 
Internet, which can be executed from disk or in memory without touching disk.\n\nA number of PowerShell-
based offensive testing tools are available, including [Empire](https://attack.mitre.org/software/S0363), 
[PowerSploit](https://attack.mitre.org/software/S0194), [PoshC2](https://attack.mitre.org/software/S0378), 
and PSAttack.(Citation: Github PSAttack)\n\nPowerShell commands/scripts can also be executed without 
directly invoking the <code>powershell.exe</code> binary through interfaces to PowerShell's underlying 
<code>System.Management.Automation</code> assembly DLL exposed through the .NET framework and Windows 
Common Language Interface (CLI).(Citation: Sixdub PowerPick Jan 2016)(Citation: SilentBreak Offensive PS 
Dec 2015)(Citation: Microsoft PSfromCsharp APR 2014)",
      "kill_chain_phases": [
        {
          "kill_chain_name": "mitre-attack",
          "phase_name": "execution"
        }
      ]
    },
    {
      "id": "attack-pattern--3fc9b85a-2862-4363-a64d-d692e3ffbee0",
      "type": "attack-pattern",
      "spec_version": "2.1",
      "created_by_ref": "identity--c78cb6e5-0c4b-4611-8297-d1b8b55e40b5",
      "created": "2020-02-11T18:48:28.456Z",
      "modified": "2024-10-15T14:57:46.850Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "external_references": [
        {
          "source_name": "mitre-attack",
          "url": "https://attack.mitre.org/techniques/T1555",
          "external_id": "T1555"
        },
        {
          "source_name": "F-Secure The Dukes",
          "description": "F-Secure Labs. (2015, September 17). The Dukes: 7 years of Russian 
cyberespionage. Retrieved December 10, 2015.",
          "url": "https://www.f-secure.com/documents/996508/1030745/dukes_whitepaper.pdf"
        }
      ],
      "object_marking_refs": [
        "marking-definition--fa42a846-8d90-4e51-bc29-71d5b4802168"
      ],
      "name": "Credentials from Password Stores",
      "description": "Adversaries may search for common password storage locations to obtain user 
credentials.(Citation: F-Secure The Dukes) Passwords are stored in several places on a system, depending 
on the operating system or application holding the credentials. There are also specific applications and 
services that store passwords to make them easier for users to manage and maintain, such as password 
managers and cloud secrets vaults. Once credentials are obtained, they can be used to perform lateral 
movement and access restricted information.",
      "kill_chain_phases": [
        {
          "kill_chain_name": "mitre-attack",
          "phase_name": "credential-access"
        }
      ]
    },
    {
      "id": "attack-pattern--6495ae23-3ab4-43c5-a94f-5638a2c31fd2",
      "type": "attack-pattern",
      "spec_version": "2.1",
      "created_by_ref": "identity--c78cb6e5-0c4b-4611-8297-d1b8b55e40b5",
      "created": "2020-01-28T17:05:14.707Z",
      "modified": "2024-04-16T12:40:58.536Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "external_references": [
        {
          "source_name": "mitre-attack",
          "url": "https://attack.mitre.org/techniques/T1070/001",
          "external_id": "T1070.001"
        },
        {
          "source_name": "disable_win_evt_logging",
          "description": "Heiligenstein, L. (n.d.). REP-25: Disable Windows Event Logging. Retrieved April
7, 2022.",
          "url": "https://ptylu.github.io/content/report/report.html?report=25"
        },
        {
          "source_name": "Microsoft Clear-EventLog",
          "description": "Microsoft. (n.d.). Clear-EventLog. Retrieved July 2, 2018.",
          "url": "https://docs.microsoft.com/powershell/module/microsoft.powershell.management/clear-
eventlog"
        },
        {
          "source_name": "Microsoft EventLog.Clear",
          "description": "Microsoft. (n.d.). EventLog.Clear Method (). Retrieved July 2, 2018.",
          "url": "https://msdn.microsoft.com/library/system.diagnostics.eventlog.clear.aspx"
        },
        {
          "source_name": "Microsoft wevtutil Oct 2017",
          "description": "Plett, C. et al.. (2017, October 16). wevtutil. Retrieved July 2, 2018.",
          "url": "https://docs.microsoft.com/windows-server/administration/windows-commands/wevtutil"
        }
      ],
      "object_marking_refs": [
        "marking-definition--fa42a846-8d90-4e51-bc29-71d5b4802168"
      ],
      "name": "Clear Windows Event Logs",
      "description": "Adversaries may clear Windows Event Logs to hide the activity of an intrusion.
Windows Event Logs are a record of a computer's alerts and notifications. There are three system-defined
sources of events: System, Application, and Security, with five event types: Error, Warning, Information,
Success Audit, and Failure Audit.\n\n\nWith administrator privileges, the event logs can be cleared with
the following utility commands:\n\n* <code>wevtutil cl system</code>\n* <code>wevtutil cl
application</code>\n* <code>wevtutil cl security</code>\n\nThese logs may also be cleared through other
mechanisms, such as the event viewer GUI or [PowerShell](https://attack.mitre.org/techniques/T1059/001).
For example, adversaries may use the PowerShell command <code>Remove-EventLog -LogName Security</code> to
delete the Security EventLog and after reboot, disable future logging.  Note: events may still be
generated and logged in the .evtx file between the time the command is run and the reboot.(Citation:
disable_win_evt_logging)\n\nAdversaries may also attempt to clear logs by directly deleting the stored log
files within `C:\\Windows\\System32\\winevt\\logs\\`.",
      "kill_chain_phases": [
        {
          "kill_chain_name": "mitre-attack",
          "phase_name": "defense-evasion"
        }
      ]
    },
    {
      "id": "attack-pattern--60d0c01d-e2bf-49dd-a453-f8a9c9fa6f65",
      "type": "attack-pattern",
      "spec_version": "2.1",
      "created_by_ref": "identity--c78cb6e5-0c4b-4611-8297-d1b8b55e40b5",
      "created": "2020-02-11T18:29:47.757Z",
      "modified": "2024-09-12T15:28:23.398Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "external_references": [
        {
          "source_name": "mitre-attack",
          "url": "https://attack.mitre.org/techniques/T1021/006",
          "external_id": "T1021.006"
        },
        {
          "source_name": "Medium Detecting Lateral Movement",
          "description": "French, D. (2018, September 30). Detecting Lateral Movement Using Sysmon and
Splunk. Retrieved October 11, 2019.",
          "url": "https://medium.com/threatpunter/detecting-lateral-movement-using-sysmon-and-splunk-
318d3be141bc"
        },
        {
          "source_name": "Jacobsen 2014",
          "description": "Jacobsen, K. (2014, May 16). Lateral Movement with PowerShell&#91;slides&#93;.
Retrieved November 12, 2014.",
          "url": "https://www.slideshare.net/kieranjacobsen/lateral-movement-with-power-shell-2"
        },
        {
          "source_name": "MSDN WMI",
          "description": "Microsoft. (n.d.). Windows Management Instrumentation. Retrieved April 27,
2016.",
          "url": "https://msdn.microsoft.com/en-us/library/aa394582.aspx"
        },
        {
          "source_name": "Microsoft WinRM",
          "description": "Microsoft. (n.d.). Windows Remote Management. Retrieved September 12, 2024.",
          "url": "https://learn.microsoft.com/en-us/windows/win32/winrm/portal"
        }
      ],
      "object_marking_refs": [
        "marking-definition--fa42a846-8d90-4e51-bc29-71d5b4802168"
      ],
      "name": "Windows Remote Management",
      "description": "Adversaries may use [Valid Accounts](https://attack.mitre.org/techniques/T1078) to
interact with remote systems using Windows Remote Management (WinRM). The adversary may then perform
actions as the logged-on user.\n\nWinRM is the name of both a Windows service and a protocol that allows a
user to interact with a remote system (e.g., run an executable, modify the Registry, modify
services).(Citation: Microsoft WinRM) It may be called with the `winrm` command or by any number of
programs such as PowerShell.(Citation: Jacobsen 2014) WinRM  can be used as a method of remotely
interacting with [Windows Management
Instrumentation](https://attack.mitre.org/techniques/T1047).(Citation: MSDN WMI)",
      "kill_chain_phases": [
        {
          "kill_chain_name": "mitre-attack",
          "phase_name": "lateral-movement"
        }
      ]
    },
    {
      "id": "x-oca-behavior--aefb3377-95bd-4cf9-984a-f804f809409a",
      "type": "x-oca-behavior",
      "spec_version": "2.1",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2024-11-13T20:00:00.000Z",
      "modified": "2024-11-13T20:00:00.000Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "name": "Computer Generating Hashes from LSASS",
      "description": "Process causing computer to dump hashes with lsass",
      "behavior_class": "anomalous",
      "tactic": "Execution",
      "technique": "T1003.001 - OS Credential Dumping - LSASS Memory",
      "first_seen": "2022-03-31T13:00:00.000Z",
      "platforms": [
        {
          "operating_system": "Microsoft Windows",
          "version": "10"
        }
      ],
      "extensions": {
        "extension-definition--9c59fd79-4215-4ba2-920d-3e4f320e1e62": {
          "extension_type": "new-sdo"
        }
      }
    },
    {
      "id": "x-oca-behavior--8858a2bd-5729-4ef1-9932-3e3cc7feff99",
      "type": "x-oca-behavior",
      "spec_version": "2.1",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2025-01-30T20:00:00.000Z",
      "modified": "2025-01-30T20:00:00.000Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "name": "Load Powerview Recon Module",
      "description": "Loading of the Powerview Recon module",
      "behavior_class": "anomalous",
      "tactic": "Execution",
      "technique": "T1059.001 - Command and Scripting Interpreter - PowerShell",
      "first_seen": "2022-03-31T13:00:00.000Z",
      "platforms": [
        {
          "operating_system": "Microsoft Windows",
          "version": "10"
        }
      ],
      "extensions": {
        "extension-definition--9c59fd79-4215-4ba2-920d-3e4f320e1e62": {
          "extension_type": "new-sdo"
        }
      }
    },
    {
      "id": "x-oca-behavior--b63470f0-0bc7-467e-be25-08f5fbfc0415",
      "type": "x-oca-behavior",
      "spec_version": "2.1",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2025-01-30T20:00:00.000Z",
      "modified": "2025-01-30T20:00:00.000Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "name": "Extract NTDS File",
      "description": "Adversary extracts the ntds.dit file, which contains Active Directory data",
      "behavior_class": "anomalous",
      "tactic": "Credential Access",
      "technique": "T1555 - Credentials from Password Stores",
      "first_seen": "2022-03-31T13:00:00.000Z",
      "platforms": [
        {
          "operating_system": "Microsoft Windows",
          "version": "10"
        },
        {
          "operating_system": "Linux"
        },
        {
          "operating_system": "macOS"
        },
        {
          "operating_system": "IaaS"
        }
      ],
      "extensions": {
        "extension-definition--9c59fd79-4215-4ba2-920d-3e4f320e1e62": {
          "extension_type": "new-sdo"
        }
      }
    },
    {
      "id": "x-oca-behavior--b4eb6b07-787a-49d3-9677-fedef58d8342",
      "type": "x-oca-behavior",
      "spec_version": "2.1",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2024-11-14T15:00:00.000Z",
      "modified": "2024-11-14T15:00:00.000Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "name": "Log Deletion",
      "description": "Windows Event Logs cleared to hide the activity of an intrusion",
      "behavior_class": "anomalous",
      "tactic": "Defense Evasion",
      "technique": "T1070.001 - Indicator Removal - Clear Windows Event Logs",
      "first_seen": "2022-03-31T13:00:00.000Z",
      "platforms": [
        {
          "operating_system": "Microsoft Windows",
          "version": "10"
        }
      ],
      "extensions": {
        "extension-definition--9c59fd79-4215-4ba2-920d-3e4f320e1e62": {
          "extension_type": "new-sdo"
        }
      }
    },
    {
      "id": "x-oca-behavior--0bef5969-be8f-4959-adcf-168617415e33",
      "type": "x-oca-behavior",
      "spec_version": "2.1",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2024-11-14T15:00:00.000Z",
      "modified": "2024-11-14T15:00:00.000Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "name": "Winrs running commands",
      "description": "Adversary uses winrs to laterally move to a target computer by executing commands",
      "behavior_class": "anomalous",
      "tactic": "Lateral Movement",
      "technique": "T1021.006 - Remote Services - Windows Remote Management",
      "first_seen": "2025-03-06T05:00:00.000Z",
      "platforms": [
        {
          "operating_system": "Microsoft Windows",
          "version": "10"
        }
      ],
      "extensions": {
        "extension-definition--9c59fd79-4215-4ba2-920d-3e4f320e1e62": {
          "extension_type": "new-sdo"
        }
      }
    },
    {
      "id": "x-oca-detection--91111a24-7f6c-4ce2-9259-8c2aa1d88110",
      "type": "x-oca-detection",
      "spec_version": "2.1",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2024-10-30T18:00:00.000Z",
      "modified": "2024-10-30T18:00:00.000Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "name": "Computer Generating Hashes from LSASS",
      "description": "Process causing computer to dump hashes with lsass",
      "analytic": {
        "type": "Sigma Rule - base64 encoded YAML file",
        "rule":
"dGl0bGU6IENvbXB1dGVyIGdlbmVyYXRpbmcgaGFzaGVzCmlkOiAxQzJCMEYzMS02NEYzLTRCNEEtQTBGNi1DQ0ZERkYyRTk4Q0QKc3Rhd
HVzOiBleHBlcmltZW50YWwKZGVzY3JpcHRpb246IFByb2Nlc3MgY2F1c2luZyBjb21wdXRlciB0byBkdW1wIGhhc2hlcyB3aXRoIGxzYXN
zCnJlZmVyZW5jZXM6IGh0dHBzOi8vYXR0YWNrLm1pdHJlLm9yZy90ZWNobmlxdWVzL1QxMDAzLzAwMS8KYXV0aG9yOiBPQ0EKZGF0ZTogM
jAyNC8xMC8yMQptb2RpZmllZDogMjAyNC8xMC8yMQp0YWdzOgogICAgLSBhdHRhY2sudDEwMzMuMDAxCiAgICAtIGF0dGFjay5leGVjdXR
pb24KbG9nc291cmNlOgogICAgY2F0ZWdvcnk6IHByb2Nlc3NfY3JlYXRpb24KICAgIHByb2R1Y3Q6IHdpbmRvd3MKZGV0ZWN0aW9uOgogI
CAgc2VsZWN0aW9uXzE6CiAgICAgICAgZXZlbnQuY29kZTogOAogICAgc2VsZWN0aW9uXzI6CiAgICAgICAgd2lubG9nLmV2ZW50X2RhdGE
uVGFyZ2V0SW1hZ2U6ICcqbHNhc3MqJwogICAgY29uZGl0aW9uOiBzZWxlY3Rpb25fMSBhbmQgc2VsZWN0aW9uXzIKZmFsc2Vwb3NpdGl2Z
XM6CiAgICAtIExlZ2l0aW1hdGUgbHNhc3MgdXNhZ2UKbGV2ZWw6IGhpZ2g="
      },
      "extensions": {
        "extension-definition--c4690e13-107e-4796-8158-0dcf1ae7bc89": {
          "extension_type": "new-sdo"
        }
      }
    },
    {
      "id": "x-oca-detection--21192a86-057c-4c58-a711-4cddbee31912",
      "type": "x-oca-detection",
      "spec_version": "2.1",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2024-10-30T18:00:00.000Z",
      "modified": "2024-10-30T18:00:00.000Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "name": "PowerSploit PowerView Usage",
      "description": "Powersploit usage to enumerate network",
      "analytic": {
        "type": "Sigma Rule - base64 encoded YAML file",
        "rule":
"dGl0bGU6IENvbW1hbmQgYW5kIFNjcmlwdGluZyBJbnRlcnByZXRlciAtIFBvd2VyU2hlbGwgUG93ZXJzcGxvaXQKaWQ6IHQ0MmtuNW04L
Tl2N3ItNTEwMi0zODQxLXAzajFyMjZiOTB3MgpzdGF0dXM6IGV4cGVyaW1lbnRhbApkZXNjcmlwdGlvbjogUG93ZXJzcGxvaXQgdXNhZ2U
gdG8gZW51bWVyYXRlIG5ldHdvcmsKcmVmZXJlbmNlczogaHR0cHM6Ly9hdHRhY2subWl0cmUub3JnL3RlY2huaXF1ZXMvVDEwNTkvMDAxL
wphdXRob3I6IE9DQQpkYXRlOiAyMDI0LzEwLzE3Cm1vZGlmaWVkOiAyMDI0LzEwLzE3CnRhZ3M6CiAgICAtIGF0dGFjay50MTA1OS4wMDE
KICAgIC0gYXR0YWNrLmV4ZWN1dGlvbgpsb2dzb3VyY2U6CiAgICBjYXRlZ29yeTogcHJvY2Vzc19jcmVhdGlvbgogICAgcHJvZHVjdDogd
2luZG93cwpkZXRlY3Rpb246CiAgICBzZWxlY3Rpb25fMToKICAgICAgICBldmVudC5jb2RlOiA0MTA0CiAgICBzZWxlY3Rpb25fMjoKICA
gICAgICB3aW5sb2cuZXZlbnRfZGF0YS5TY3JpcHRCbG9ja1RleHQ6ICcqR2V0LURvbWFpbkNvbXB1dGVyKicKICAgIHNlbGVjdGlvbl8zO
gogICAgICAgIHdpbmxvZy5ldmVudF9kYXRhLlNjcmlwdEJsb2NrVGV4dDogJypHZXQtTmV0Q29tcHV0ZXIqJwogICAgY29uZGl0aW9uOiB
zZWxlY3Rpb25fMSBhbmQgc2VsZWN0aW9uXzIgYW5kIHNlbGVjdGlvbl8zCmZhbHNlcG9zaXRpdmVzOgogICAgLSBMZWdpdGltYXRlIHBvd
2Vyc2hlbGwgc2NyaXB0cwpsZXZlbDogaGlnaA=="
      },
      "extensions": {
        "extension-definition--c4690e13-107e-4796-8158-0dcf1ae7bc89": {
          "extension_type": "new-sdo"
        }
      }
    },
    {
      "id": "x-oca-detection--334886c6-cb58-4aba-b470-0ddc361ace33",
      "type": "x-oca-detection",
      "spec_version": "2.1",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2024-11-06T17:00:00.000Z",
      "modified": "2024-11-06T17:00:00.000Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "name": "NTDS File Copied",
      "description": "credentials sought to perform lateral movement and access restricted information
privileges",
      "analytic": {
        "type": "Sigma Rule - base64 encoded YAML file",
        "rule":
"dGl0bGU6IENyZWRlbnRpYWxzIGZyb20gUGFzc3dvcmQgU3RvcmVzCmlkOiBxMzRucDZrNy0ybTlyLTc1MDEtMTg0Mi14MXYxajU3YjA5d
DMKc3RhdHVzOiBleHBlcmltZW50YWwKZGVzY3JpcHRpb246IGNyZWRlbnRpYWxzIHNvdWdodCB0byBwZXJmb3JtIGxhdGVyYWwgbW92ZW1
lbnQgYW5kIGFjY2VzcyByZXN0cmljdGVkIGluZm9ybWF0aW9uIHByaXZpbGVnZXMKcmVmZXJlbmNlczogaGh0dHBzOi8vYXR0YWNrLm1pd
HJlLm9yZy90ZWNobmlxdWVzL1QxNTU1LwphdXRob3I6IE9DQQpkYXRlOiAyMDI0LzEwLzIzCm1vZGlmaWVkOiAyMDI0LzEwLzIzCnRhZ3M
6CiAgICAtIGF0dGFjay50MTU1NQogICAgLSBhdHRhY2suY3JlZGVudGlhbF9hY2Nlc3MKbG9nc291cmNlOgogICAgY2F0ZWdvcnk6IHByb2Nlc3NfY3JlYXRpb24KICAgIHByb2R1Y3Q6IHdpbmRvd3MKZGV0ZWN0aW9uOgogICAgc2VsZWN0aW9uOgogICAgICAgIGV2ZW50LmNvZGU
6IDMyNQogICAgICAgIG1lc3NhZ2U6ICcqbnRkcy5kaXQqJwogICAgY29uZGl0aW9uOiBzZWxlY3Rpb24KZmFsc2Vwb3NpdGl2ZXM6CiAgI
CAtIGxlZ2l0aW1hdGUgdG9rZW4KbGV2ZWw6IGhpZ2g="
      },
      "extensions": {
        "extension-definition--c4690e13-107e-4796-8158-0dcf1ae7bc89": {
          "extension_type": "new-sdo"
        }
      }
    },
    {
      "id": "x-oca-detection--9278b8ea-7c5e-47b7-acf3-bda6d7152f59",
      "type": "x-oca-detection",
      "spec_version": "2.1",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2024-11-06T17:00:00.000Z",
      "modified": "2024-11-06T17:00:00.000Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "name": "Log Deletion",
      "description": "Windows Event Logs cleared to hide the activity of an intrusion",
      "analytic": {
        "type": "Sigma Rule - base64 encoded YAML file",
        "rule":
"dGl0bGU6IEluZGljYXRvciBSZW1vdmFsIC0gQ2xlYXIgV2luZG93cyBFdmVudCBMb2dzCmlkOiBtNThrcDJqNC03djNoLTkxMDItNjUyM
S1wNGIxbjM5dDA2ZDEKc3RhdHVzOiBleHBlcmltZW50YWwKZGVzY3JpcHRpb246IFdpbmRvd3MgRXZlbnQgTG9ncyBjbGVhcmVkIHRvIGh
pZGUgdGhlIGFjdGl2aXR5IG9mIGFuIGludHJ1c2lvbgpyZWZlcmVuY2VzOiBodHRwczovL2F0dGFjay5taXRyZS5vcmcvdGVjaG5pcXVlc
y9UMTA3MC8wMDEvCmF1dGhvcjogT0NBCmRhdGU6IDIwMjQvMTAvMjMKbW9kaWZpZWQ6IDIwMjQvMTAvMjMKdGFnczoKICAgIC0gYXR0YWN
rLnQxMDcwLjAwMQogICAgLSBhdHRhY2suZGVmZW5zZV9ldmFzaW9uCmxvZ3NvdXJjZToKICAgIGNhdGVnb3J5OiBwcm9jZXNzX2NyZWF0a
W9uCiAgICBwcm9kdWN0OiB3aW5kb3dzCmRldGVjdGlvbjoKICAgIHNlbGVjdGlvbl8xOgogICAgICAgIGV2ZW50LmNvZGU6IDEKICAgIHN
lbGVjdGlvbl8yOgogICAgICAgIHdpbmxvZy5ldmVudF9kYXRhLkNvbW1hbmRMaW5lLmtleXdvcmQ6IOKAnSp3ZXZ0dXRpbCoiCiAgICBzZ
WxlY3Rpb25fMzoKICAgICAgICB3aW5sb2cuZXZlbnRfZGF0YS5Db21tYW5kTGluZS5rZXl3b3JkOiAiKmNsKiIKICAgIGNvbmRpdGlvbjo
gYWxsIG9mIHNlbGVjdGlvbl8qCmZhbHNlcG9zaXRpdmVzOgogICAgLSBsZWdpdGltYXRlIGFkbWluaXN0cmF0b3IgYWN0aXZpdHkKbGV2Z
Ww6IGhpZ2g="
      },
      "extensions": {
        "extension-definition--c4690e13-107e-4796-8158-0dcf1ae7bc89": {
          "extension_type": "new-sdo"
        }
      }
    },
    {
      "id": "x-oca-detector--f9ccdd3d-2217-45fd-8e65-055da8e66c3e",
      "type": "x-oca-detector",
      "spec_version": "2.1",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2023-05-01T12:00:00.000Z",
      "modified": "2023-05-01T12:00:00.000Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "name": "Sigma",
      "description": "A generic signature format for log files.",
      "cpe": "cpe:2.3:a:sigmahq:sigma:0.21:*:*:*:*:*:*:*",
      "valid_until": "2027-05-01T12:00:00.000Z",
      "vendor": "SigmaHQ",
      "vendor_url": "https://github.com/SigmaHQ",
      "product": "Sigma",
      "product_url": "https://github.com/SigmaHQ/sigma",
      "detection_types": [
        "log"
      ],
      "detector_data_categories": [
        "log"
      ],
      "detector_data_sources": [
        "windows event log",
        "sysmon",
        "zeek",
        "rita",
        "argus"
      ],
      "extensions": {
        "extension-definition--5cccba5c-0be4-450c-8672-b66e98515754": {
          "extension_type": "new-sdo"
        }
      }
    },
    {
      "id": "grouping--e6ebaa0f-c847-4a82-bf28-26c8a92bc705",
      "type": "grouping",
      "spec_version": "2.1",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2024-11-22T09:10:58.968Z",
      "modified": "2024-11-22T09:10:58.968Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "name": "Living off the Land Detections",
      "context": "detection-correlation",
      "object_refs": [
        "x-oca-detection--91111a24-7f6c-4ce2-9259-8c2aa1d88110",
        "x-oca-detection--21192a86-057c-4c58-a711-4cddbee31912",
        "x-oca-detection--334886c6-cb58-4aba-b470-0ddc361ace33",
        "x-oca-detection--9278b8ea-7c5e-47b7-acf3-bda6d7152f59",
        "x-oca-detection--4f808859-8559-4809-8bde-6f231e30560d"
      ]
    },
    {
      "id": "grouping--3651b038-e533-4fff-b20d-7689cbf4b291",
      "type": "grouping",
      "spec_version": "2.1",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2024-11-22T09:10:58.968Z",
      "modified": "2024-11-22T09:10:58.968Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "name": "Living off the Land Behavior Bundle",
      "context": "suspicious-activity",
      "object_refs": [
        "identity--c78cb6e5-0c4b-4611-8297-d1b8b55e40b5",
        "identity--b085a68a-bf48-4316-9667-37af78cba894",
        "attack-pattern--65f2d882-3f41-4d48-8a06-29af77ec9f90",
        "attack-pattern--970a3432-3237-47ad-bcca-7d8cbb217736",
        "attack-pattern--3fc9b85a-2862-4363-a64d-d692e3ffbee0",
        "attack-pattern--6495ae23-3ab4-43c5-a94f-5638a2c31fd2",
        "x-oca-behavior--b4eb6b07-787a-49d3-9677-fedef58d8342",
        "x-oca-behavior--B63470F0-0BC7-467E-BE25-08F5FBFC0415",
        "x-oca-behavior--8858A2BD-5729-4EF1-9932-3E3CC7FEFF99",
        "x-oca-behavior--aefb3377-95bd-4cf9-984a-f804f809409a",
        "x-oca-detector--88b3d9a1-cd09-461b-a782-f0803638151b",
        "x-oca-detection--91111a24-7f6c-4ce2-9259-8c2aa1d88110",
        "x-oca-detection--21192a86-057c-4c58-a711-4cddbee31912",
        "x-oca-detection--334886c6-cb58-4aba-b470-0ddc361ace33",
        "x-oca-detection--9278b8ea-7c5e-47b7-acf3-bda6d7152f59",
        "x-oca-detection--4f808859-8559-4809-8bde-6f231e30560d",
        "grouping--e6ebaa0f-c847-4a82-bf28-26c8a92bc705",
        "attack-pattern--60d0c01d-e2bf-49dd-a453-f8a9c9fa6f65",
        "x-oca-playbook--c2b057e4-f4ef-4423-ab11-1aef72e44003",
        "course-of-action--7ed3c8e5-945f-492d-ac70-225c07d38eeb",
        "x-oca-playbook--447f032b-b463-4e09-a09f-e3610f59a8ab"
      ]
    },
    {
      "id": "course-of-action--7ed3c8e5-945f-492d-ac70-225c07d38eeb",
      "type": "course-of-action",
      "spec_version": "2.1",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2025-03-03T13:00:00.000Z",
      "modified": "2025-03-03T13:00:00.000Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "extensions": {
        "extension-definition--bbc1d5c8-7ddc-4e89-be9c-f33ad02d71dd": {
          "extension_type": "property-extension",
          "playbooks": {
            "x-oca-playbook--447f032b-b463-4e09-a09f-e3610f59a8ab": "application/cacao+json",
            "x-oca-playbook--c2b057e4-f4ef-4423-ab11-1aef72e44003": "BPMN"
          }
        }
      },
      "name": "Correlate and Score Behaviors",
      "description": "This course of action investigates an observed behavior by correlating it with
related behaviors."
    },
    {
      "id": "x-oca-playbook--c2b057e4-f4ef-4423-ab11-1aef72e44003",
      "type": "x-oca-playbook",
      "spec_version": "2.1",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2025-03-03T13:00:00.000Z",
      "modified": "2025-03-03T13:00:00.000Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "name": "Correlate and Score Behaviors",
      "description": "This workflow correlates an observed behavior with related behaviors that may
indicate a living off the land attack. The number of behaviors are tallied into points with a higher score
increasing the likelihood that an attack has been observed. Decode the Base64 string for the playbook
contents.",
      "playbook_creator": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "playbook_creation_time": "2025-03-03T13:00:00.000Z",
      "playbook_modification_time": "2025-03-03T13:00:00.000Z",
      "playbook_format": "BPMN",
      "is_playbook_template": true,
      "playbook_type": [
        "detection",
        "notification"
      ],
      "playbook_impact": 0,
      "playbook_severity": 0,
      "playbook_priority": 0,
      "playbook_bin":
"PD94bWwgdmVyc2lvbj0iMS4wIiBlbmNvZGluZz0iVVRGLTgiPz4KPGJwbW46ZGVmaW5pdGlvbnMgeG1sbnM6YnBtbj0iaHR0cDovL3d3d
y5vbWcub3JnL3NwZWMvQlBNTi8yMDEwMDUyNC9NT0RFTCIgeG1sbnM6YnBtbmRpPSJodHRwOi8vd3d3Lm9tZy5vcmcvc3BlYy9CUE1OLzI
wMTAwNTI0L0RJIiB4bWxuczpkYz0iaHR0cDovL3d3dy5vbWcub3JnL3NwZWMvREQvMjAxMDA1MjQvREMiIHhtbG5zOmJpb2M9Imh0dHA6L
y9icG1uLmlvL3NjaGVtYS9icG1uL2Jpb2NvbG9yLzEuMCIgeG1sbnM6Y29sb3I9Imh0dHA6Ly93d3cub21nLm9yZy9zcGVjL0JQTU4vbm9
uLW5vcm1hdGl2ZS9jb2xvci8xLjAiIHhtbG5zOmRpPSJodHRwOi8vd3d3Lm9tZy5vcmcvc3BlYy9ERC8yMDEwMDUyNC9ESSIgeG1sbnM6b
W9kZWxlcj0iaHR0cDovL2NhbXVuZGEub3JnL3NjaGVtYS9tb2RlbGVyLzEuMCIgaWQ9IkRlZmluaXRpb25zXzFvYzFndDMiIHRhcmdldE5
hbWVzcGFjZT0iaHR0cDovL2JwbW4uaW8vc2NoZW1hL2JwbW4iIGV4cG9ydGVyPSJDYW11bmRhIE1vZGVsZXIiIGV4cG9ydGVyVmVyc2lvb
j0iNS41LjEiIG1vZGVsZXI6ZXhlY3V0aW9uUGxhdGZvcm09IkNhbXVuZGEgUGxhdGZvcm0iIG1vZGVsZXI6ZXhlY3V0aW9uUGxhdGZvcm1
```

```
WZXJzaW9uPSI3LjE4LjAiPgogIDxicG1uOnByb2Nlc3MgaWQ9IlByb2Nlc3NfMGRod3h4dSIgaXNFeGVjdXRhYmxlPSJ0cnVlIj4KICAgI
DxicG1uOnN0YXJ0RXZlbnQgaWQ9IkV2ZW50XzB4NmNkMzEiIG5hbWU9IkNvbXB1dGVyIEdlbmVyYXRlcyBQYXNzd29yZCBIYXNoZXMiPgo
gICAgICA8YnBtbjpvdXRnb2luZz5GbG93XzBrN2J4NXY8L2JwbW46b3V0Z29pbmc+CiAgICAgIDxicG1uOnNpZ25hbEV2ZW50RGVmaW5pd
GlvbiBpZD0iU2lnbmFsRXZlbnREZWZpbml0aW9uXzF5NTRveWQiIC8+CiAgICA8L2JwbW46c3RhcnRFdmVudD4KICAgIDxicG1uOnN0YXJ
0RXZlbnQgaWQ9IkV2ZW50XzB3dnp5dG8iIG5hbWU9IkNvbXB1dGVyIHVzZXMgUG93ZXJzaGVsbCB0byBFbnVtZXJhdGUgTmV0d29yayI+C
iAgICAgIDxicG1uOm91dGdvaW5nPkZsb3dfMWdxeWhhNjwvYnBtbjpvdXRnb2luZz4KICAgICAgPGJwbW46c2lnbmFsRXZlbnREZWZpbml
0aW9uIGlkPSJTaWduYWxFdmVudERlZmluaXRpb25fMDIybDIxMyIgLz4KICAgIDwvYnBtbjpzdGFydEV2ZW50PgogICAgPGJwbW46c3Rhc
nRFdmVudCBpZD0iRXZlbnRfMXZ1ZmFkayIgbmFtZT0iV2lucnMgcnVubmluZyBjb21tYW5kcyI+CiAgICAgIDxicG1uOm91dGdvaW5nPkZ
sb3dfMHVpODVjazwvYnBtbjpvdXRnb2luZz4KICAgICAgPGJwbW46c2lnbmFsRXZlbnREZWZpbml0aW9uIGlkPSJTaWduYWxFdmVudERlZ
mluaXRpb25fMTVqazZ3ZiIgLz4KICAgIDwvYnBtbjpzdGFydEV2ZW50PgogICAgPGJwbW46c3RhcnRFdmVudCBpZD0iRXZlbnRfMWY3YWV
iNyIgbmFtZT0iTlREUyBGaWxlIENvcGllZCBvbiBDb21wdXRlciI+CiAgICAgIDxicG1uOm91dGdvaW5nPkZsb3dfMGd6aHkyajwvYnBtb
jpvdXRnb2luZz4KICAgICAgPGJwbW46c2lnbmFsRXZlbnREZWZpbml0aW9uIGlkPSJTaWduYWxFdmVudERlZmluaXRpb25fMDdnaW9zbSI
gLz4KICAgIDwvYnBtbjpzdGFydEV2ZW50PgogICAgPGJwbW46c3RhcnRFdmVudCBpZD0iRXZlbnRfMThwNG9sbCIgbmFtZT0iTG9ncyBEZ
WxldGVkIG9uIENvbXB1dGVyIj4KICAgICAgPGJwbW46b3V0Z29pbmc+Rmxvd18waGVpOWx6PC9icG1uOm91dGdvaW5nPgogICAgICA8YnB
tbjpzaWduYWxFdmVudERlZmluaXRpb24gaWQ9IlNpZ25hbEV2ZW50RGVmaW5pdGlvbl8wa3d3NDJ2IiAvPgogICAgPC9icG1uOnN0YXJ0R
XZlbnQ+CiAgICA8YnBtbjpzZXJ2aWNlVGFzayBpZD0iQWN0aXZpdHlfMWdkMWx5bSIgbmFtZT0iQ29sbGVjdCBhbGVydCBmaWVsZHMiPgo
gICAgICA8YnBtbjppbmNvbWluZz5GbG93XzBjZWdpMW08L2JwbW46aW5jb21pbmc+CiAgICAgIDxicG1uOm91dGdvaW5nPkZsb3dfMGdhd
HJzYzwvYnBtbjpvdXRnb2luZz4KICAgIDwvYnBtbjpzZXJ2aWNlVGFzaz4KICAgIDxicG1uOnNlcnZpY2VUYXNrIGlkPSJBY3Rpdml0eV8
xb3hpeTVvIiBuYW1lPSJDb2xsZWN0IGFsZXJ0IGZpZWxkcyI+CiAgICAgIDxicG1uOmluY29taW5nPkZsb3dfMHl3NTk2dTwvYnBtbjppb
mNvbWluZz4KICAgICAgPGJwbW46b3V0Z29pbmc+Rmxvd18xdnM4bzM4PC9icG1uOm91dGdvaW5nPgogICAgPC9icG1uOnNlcnZpY2VUYXN
rPgogICAgPGJwbW46c2VydmljZVRhc2sgaWQ9IkFjdGl2aXR5XzByOXlpbDYiIG5hbWU9IkNvbGxlY3QgYWxlcnQgZmllbGRzIj4KICAgI
CAgPGJwbW46aW5jb21pbmc+Rmxvd18xYnRxajM5PC9icG1uOmluY29taW5nPgogICAgICA8YnBtbjpvdXRnb2luZz5GbG93XzBtMm04bzI
8L2JwbW46b3V0Z29pbmc+CiAgICA8L2JwbW46c2VydmljZVRhc2s+CiAgICA8YnBtbjpzZXJ2aWNlVGFzayBpZD0iQWN0aXZpdHlfMXBkO
GF0MyIgbmFtZT0iQ29sbGVjdCBhbGVydCBmaWVsZHMiPgogICAgICA8YnBtbjppbmNvbWluZz5GbG93XzF4NThlbXg8L2JwbW46aW5jb21
pbmc+CiAgICAgIDxicG1uOm91dGdvaW5nPkZsb3dfMGJnbXNqMDwvYnBtbjpvdXRnb2luZz4KICAgIDwvYnBtbjpzZXJ2aWNlVGFzaz4KI
CAgIDxicG1uOnNlcnZpY2VUYXNrIGlkPSJBY3Rpdml0eV8xNjIwYjE1IiBuYW1lPSJDb2xsZWN0IGFsZXJ0IGZpZWxkcyI+CiAgICAgIDx
icG1uOmluY29taW5nPkZsb3dfMHdkZTFmMjwvYnBtbjppbmNvbWluZz4KICAgICAgPGJwbW46b3V0Z29pbmc+Rmxvd18xM2pjaHkyPC9ic
G1uOm91dGdvaW5nPgogICAgPC9icG1uOnNlcnZpY2VUYXNrPgogICAgPGJwbW46ZXhjbHVzaXZlR2F0ZXdheSBpZD0iR2F0ZXdheV8xajZ
vZXFuIiBuYW1lPSJJcyB0aGUgcGFyZW50IHByb2Nlc3Mgb24gdGhpcyBob3N0IHRoZSBzYW1lIGFzIHBhcmVudCBwcm9jZXNzIG9uIHNhb
WUgaG9zdCBmb3Igb3RoZXIgYWxlcnRzICh3aXRoaW4gMSBkYXkpPyI+CiAgICAgIDxicG1uOmluY29taW5nPkZsb3dfMGdhdHJzYzwvYnB
tbjppbmNvbWluZz4KICAgICAgPGJwbW46b3V0Z29pbmc+Rmxvd18wNHNmMGdnPC9icG1uOm91dGdvaW5nPgogICAgICA8YnBtbjpvdXRnb
2luZz5GbG93XzBrZXhwYmw8L2JwbW46b3V0Z29pbmc+CiAgICA8L2JwbW46ZXhjbHVzaXZlR2F0ZXdheT4KICAgIDxicG1uOnNlcXVlbmN
lRmxvdyBpZD0iRmxvd18wNHNmMGdnIiBuYW1lPSJ5ZXMiIHNvdXJjZVJlZj0iR2F0ZXdheV8xajZvZXFuIiB0YXJnZXRSZWY9IkFjdGl2a
XR5XzFmeHR6MjIiIC8+CiAgICA8YnBtbjpzZXJ2aWNlVGFzayBpZD0iQWN0aXZpdHlfMWZ4dHoyMiIgbmFtZT0iUG90ZW50aWFsIFBvc3Q
gRXhwbG9pdGF0aW9uIGFjdGl2aXR5JiMxMDsoQWRkIDEgcG9pbnQpIj4KICAgICAgPGJwbW46aW5jb21pbmc+Rmxvd18wNHNmMGdnPC9ic
G1uOmluY29taW5nPgogICAgICA8YnBtbjpvdXRnb2luZz5GbG93XzEybGFzOGk8L2JwbW46b3V0Z29pbmc+CiAgICA8L2JwbW46c2Vydml
jZVRhc2s+CiAgICA8YnBtbjplbmRFdmVudCBpZD0iRXZlbnRfMXVvcWQ2OCIgbmFtZT0iU3RvcCI+CiAgICAgIDxicG1uOmluY29taW5nP
kZsb3dfMGtleHBibDwvYnBtbjppbmNvbWluZz4KICAgIDwvYnBtbjplbmRFdmVudD4KICAgIDxicG1uOnNlcXVlbmNlRmxvdyBpZD0iRmx
vd18wa2V4cGJsIiBuYW1lPSJubyIgc291cmNlUmVmPSJHYXRld2F5XzFqNm9lcW4iIHRhcmdldFJlZj0iRXZlbnRfMXVvcWQ2OCIgLz4KI
CAgIDxicG1uOmV4Y2x1c2l2ZUdhdGV3YXkgaWQ9IkdhdGV3YXlfMWs4b2NpNyIgbmFtZT0iSXMgdGhlIHBhcmVudCBwcm9jZXNzIG9uIHR
oaXMgaG9zdCB0aGUgc2FtZSBhcyBwYXJlbnQgcHJvY2VzcyBvbiBzYW1lIGhvc3QgZm9yIG90aGVyIGFsZXJ0cyAod2l0aGluIDEgZGF5K
T8iPgogICAgICA8YnBtbjppbmNvbWluZz5GbG93XzF2czhvMzg8L2JwbW46aW5jb21pbmc+CiAgICAgIDxicG1uOm91dGdvaW5nPkZsb3d
fMXFucTkwMjwvYnBtbjpvdXRnb2luZz4KICAgICAgPGJwbW46b3V0Z29pbmc+Rmxvd18wN2hiNjgyPC9icG1uOm91dGdvaW5nPgogICAgP
C9icG1uOmV4Y2x1c2l2ZUdhdGV3YXk+CiAgICA8YnBtbjpzZXJ2aWNlVGFzayBpZD0iQWN0aXZpdHlfMHcxdTVqOSIgbmFtZT0iUG90ZW5
0aWFsIFBvc3QgRXhwbG9pdGF0aW9uIGFjdGl2aXR5JiMxMDsoQWRkIDEgcG9pbnQpIj4KICAgICAgPGJwbW46aW5jb21pbmc+Rmxvd18xc
W5xOTAyPC9icG1uOmluY29taW5nPgogICAgICA8YnBtbjpvdXRnb2luZz5GbG93XzE3emlmdWk8L2JwbW46b3V0Z29pbmc+CiAgICA8L2J
wbW46c2VydmljZVRhc2s+CiAgICA8YnBtbjplbmRFdmVudCBpZD0iRXZlbnRfMG1qbjBzMiIgbmFtZT0iU3RvcCI+CiAgICAgIDxicG1uO
mluY29taW5nPkZsb3dfMDdoYjY4MjwvYnBtbjppbmNvbWluZz4KICAgIDwvYnBtbjplbmRFdmVudD4KICAgIDxicG1uOnNlcXVlbmNlRmx
vdyBpZD0iRmxvd18xcW5xOTAyIiBuYW1lPSJ5ZXMiIHNvdXJjZVJlZj0iR2F0ZXdheV8xazhvY2k3IiB0YXJnZXRSZWY9IkFjdGl2aXR5X
zB3MXU1ajkiIC8+CiAgICA8YnBtbjpzZXF1ZW5jZUZsb3cgaWQ9IkZsb3dfMDdoYjY4MiIgbmFtZT0ibm8iIHNvdXJjZVJlZj0iR2F0ZXd
heV8xazhvY2k3IiB0YXJnZXRSZWY9IkV2ZW50XzBtam4wczIiIC8+CiAgICA8YnBtbjpleGNsdXNpdmVHYXRld2F5IGlkPSJHYXRld2F5X
zE1MnNhczAiIG5hbWU9IklzIHRoZSB1c2VyIGFjY291bnQgb3IgaG9zdCB0aGUgc2FtZSBhcyBQb3dlcnNoZWxsIGVudW1lcmF0aW9uPyY
jMTA7wqAod2l0aGluIDEgZGF5KSI+CiAgICAgIDxicG1uOmluY29taW5nPkZsb3dfMG0ybThvMjwvYnBtbjppbmNvbWluZz4KICAgICAgP
GJwbW46b3V0Z29pbmc+Rmxvd18wbDc2djNrPC9icG1uOm91dGdvaW5nPgogICAgICA8YnBtbjpvdXRnb2luZz5GbG93XzFqbWxzN2g8L2J
wbW46b3V0Z29pbmc+CiAgICA8L2JwbW46ZXhjbHVzaXZlR2F0ZXdheT4KICAgIDxicG1uOnNlcnZpY2VUYXNrIGlkPSJBY3Rpdml0eV8xN
mkyd3EyIiBuYW1lPSJQb3RlbnRpYWwgTGF0ZXJhbCBNb3ZlbWVudCYjMTA7KEFkZCAxIHBvaW50KSI+CiAgICAgIDxicG1uOmluY29taW5
nPkZsb3dfMGw3NnYzazwvYnBtbjppbmNvbWluZz4KICAgICAgPGJwbW46b3V0Z29pbmc+Rmxvd18wbWE0ajh5PC9icG1uOm91dGdvaW5nP
gogICAgPC9icG1uOnNlcnZpY2VUYXNrPgogICAgPGJwbW46ZW5kRXZlbnQgaWQ9IkV2ZW50XzF0dGg2anciIG5hbWU9IlN0b3AiPgogICA
gICA8YnBtbjppbmNvbWluZz5GbG93XzFqbWxzN2g8L2JwbW46aW5jb21pbmc+CiAgICA8L2JwbW46ZW5kRXZlbnQ+CiAgICA8YnBtbjpzZ
XF1ZW5jZUZsb3cgaWQ9IkZsb3dfMGw3NnYzayIgbmFtZT0ieWVzIiBzb3VyY2VSZWY9IkdhdGV3YXlfMTUyc2FzMCIgdGFyZ2V0UmVmPSJ
BY3Rpdml0eV8xNmkyd3EyIiAvPgogICAgPGJwbW46c2VxdWVuY2VGbG93IGlkPSJGbG93XzFqbWxzN2giIG5hbWU9Im5vIiBzb3VyY2VSZ
WY9IkdhdGV3YXlfMTUyc2FzMCIgdGFyZ2V0UmVmPSJFdmVudF8xdHRoNmp3IiAvPgogICAgPGJwbW46c2VxdWVuY2VGbG93IGlkPSJGbG9
3XzBtMm04bzIiIHNvdXJjZVJlZj0iQWN0aXZpdHlfMHI5eWlsNiIgdGFyZ2V0UmVmPSJHYXRld2F5XzE1MnNhczAiIC8+CiAgICA8YnBtb
jpzZXJ2aWNlVGFzayBpZD0iQWN0aXZpdHlfMW5sZjU4bSIgbmFtZT0iQ3JlYXRlL0FtZW5kIENvcnJlbGF0aW9uIENhc2UiPgogICAgICA
8YnBtbjppbmNvbWluZz5GbG93XzFwamVrYWM8L2JwbW46aW5jb21pbmc+CiAgICAgIDxicG1uOmluY29taW5nPkZsb3dfMDB3eGpnejwvY
nBtbjppbmNvbWluZz4KICAgICAgPGJwbW46aW5jb21pbmc+Rmxvd18wbm1pZGh1PC9icG1uOmluY29taW5nPgogICAgICA8YnBtbjppbmN
vbWluZz5GbG93XzA2cWZwamI8L2JwbW46aW5jb21pbmc+CiAgICAgIDxicG1uOmluY29taW5nPkZsb3dfMG13OG9iczwvYnBtbjppbmNvb
WluZz4KICAgIDwvYnBtbjpzZXJ2aWNlVGFzaz4KICAgIDxicG1uOnNlcXVlbmNlRmxvdyBpZD0iRmxvd18wazdieDV2IiBzb3VyY2VSZWY
```

```
9IkV2ZW50XzB4NmNkMzEiIHRhcmdldFJlZj0iR2F0ZXdheV8xMTcyM28zIiAvPgogICAgPGJwbW46cGFyYWxsZWxHYXRld2F5IGlkPSJHY
XRld2F5XzExNzIzbzMiPgogICAgICA8YnBtbjppbmNvbWluZz5GbG93XzBrN2J4NXY8L2JwbW46aW5jb21pbmc+CiAgICAgIDxicG1uOm9
1dGdvaW5nPkZsb3dfMGNlZ2kxbTwvYnBtbjpvdXRnb2luZz4KICAgICAgPGJwbW46b3V0Z29pbmc+Rmxvd18wbm1pZGh1PC9icG1uOm91d
GdvaW5nPgogICAgPC9icG1uOnBhcmFsbGVsR2F0ZXdheT4KICAgIDxicG1uOnNlcXVlbmNlRmxvdyBpZD0iRmxvd18wY2VnaTFtIiBzb3V
yY2VSZWY9IkdhdGV3YXlfMTE3MjNvMyIgdGFyZ2V0UmVmPSJBY3Rpdml0eV8xZ2QxbHltIiAvPgogICAgPGJwbW46c2VxdWVuY2VGbG93I
GlkPSJGbG93XzFncXloYTYiIHNvdXJjZVJlZj0iRXZlbnRfMHd2enl0byIgdGFyZ2V0UmVmPSJHYXRld2F5XzB5aXIwNzQiIC8+CiAgICA
8YnBtbjpwYXJhbGxlbEdhdGV3YXkgaWQ9IkdhdGV3YXlfMHlpcjA3NCI+CiAgICAgIDxicG1uOmluY29taW5nPkZsb3dfMWdxeWhhNjwvY
nBtbjppbmNvbWluZz4KICAgICAgPGJwbW46b3V0Z29pbmc+Rmxvd18weXc1OTZ1PC9icG1uOm91dGdvaW5nPgogICAgICA8YnBtbjpvdXR
nb2luZz5GbG93XzAwd3hqZ3o8L2JwbW46b3V0Z29pbmc+CiAgICA8L2JwbW46cGFyYWxsZWxHYXRld2F5PgogICAgPGJwbW46c2VxdWVuY
2VGbG93IGlkPSJGbG93XzB5dzU5NnUiIHNvdXJjZVJlZj0iR2F0ZXdheV8weWlyMDc0IiB0YXJnZXRSZWY9IkFjdGl2aXR5XzFveGl5NW8
iIC8+CiAgICA8YnBtbjpzZXF1ZW5jZUZsb3cgaWQ9IkZsb3dfMHVpODVjayIgc291cmNlUmVmPSJFdmVudF8xdnVmYWRrIiB0YXJnZXRSZ
WY9IkdhdGV3YXlfMDBxa2duMSIgLz4KICAgIDxicG1uOnBhcmFsbGVsR2F0ZXdheSBpZD0iR2F0ZXdheV8wMHFrZ24xIj4KICAgICAgPGJ
wbW46aW5jb21pbmc+Rmxvd18wdWk4NWNrPC9icG1uOmluY29taW5nPgogICAgICA8YnBtbjpvdXRnb2luZz5GbG93XzFidHFqMzk8L2Jwb
W46b3V0Z29pbmc+CiAgICAgIDxicG1uOm91dGdvaW5nPkZsb3dfMXBqZWthYzwvYnBtbjpvdXRnb2luZz4KICAgIDwvYnBtbjpwYXJhbGx
lbEdhdGV3YXk+CiAgICA8YnBtbjpzZXF1ZW5jZUZsb3cgaWQ9IkZsb3dfMWJ0cWozOSIgc291cmNlUmVmPSJHYXRld2F5XzAwcWtnbjEiI
HRhcmdldFJlZj0iQWN0aXZpdHlfMHI5eWlsNiIgLz4KICAgIDxicG1uOnNlcXVlbmNlRmxvdyBpZD0iRmxvd18wZ3poeTJqIiBzb3VyY2V
SZWY9IkV2ZW50XzFmN2FlYjciIHRhcmdldFJlZj0iR2F0ZXdheV8wc3JvZmQwIiAvPgogICAgPGJwbW46cGFyYWxsZWxHYXRld2F5IGlkP
SJHYXRld2F5XzBzcm9mZDAiPgogICAgICA8YnBtbjppbmNvbWluZz5GbG93XzBnemh5Mmo8L2JwbW46aW5jb21pbmc+CiAgICAgIDxicG1
uOm91dGdvaW5nPkZsb3dfMXg1OGVteDwvYnBtbjpvdXRnb2luZz4KICAgICAgPGJwbW46b3V0Z29pbmc+Rmxvd18wNnFmcGpiPC9icG1uO
m91dGdvaW5nPgogICAgPC9icG1uOnBhcmFsbGVsR2F0ZXdheT4KICAgIDxicG1uOnNlcXVlbmNlRmxvdyBpZD0iRmxvd18xeDU4ZW14IiB
zb3VyY2VSZWY9IkdhdGV3YXlfMHNyb2ZkMCIgdGFyZ2V0UmVmPSJBY3Rpdml0eV8xcGQ4YXQzIiAvPgogICAgPGJwbW46c2VxdWVuY2VGb
G93IGlkPSJGbG93XzBiZ21zajAiIHNvdXJjZVJlZj0iQWN0aXZpdHlfMXBkOGF0MyIgdGFyZ2V0UmVmPSJHYXRld2F5XzA0czBldmQiIC8
+CiAgICA8YnBtbjpleGNsdXNpdmVHYXRld2F5IGlkPSJHYXRld2F5XzA0czBldmQiIG5hbWU9IldhcyB0aGUgY29weSBub3QgcGFydCBvZ
iBhIGJhY2t1cD8iPgogICAgICA8YnBtbjppbmNvbWluZz5GbG93XzBiZ21zajA8L2JwbW46aW5jb21pbmc+CiAgICAgIDxicG1uOm91dGd
vaW5nPkZsb3dfMDNrb3JyODwvYnBtbjpvdXRnb2luZz4KICAgICAgPGJwbW46b3V0Z29pbmc+Rmxvd18xMTVraHBpPC9icG1uOm91dGdva
W5nPgogICAgPC9icG1uOmV4Y2x1c2l2ZUdhdGV3YXk+CiAgICA8YnBtbjplbmRFdmVudCBpZD0iRXZlbnRfMWJzMzJpaiIgbmFtZT0iU3R
vcCI+CiAgICAgIDxicG1uOmluY29taW5nPkZsb3dfMDNrb3JyODwvYnBtbjppbmNvbWluZz4KICAgIDwvYnBtbjplbmRFdmVudD4KICAgI
DxicG1uOnNlcnZpY2VUYXNrIGlkPSJBY3Rpdml0eV8wazU0bnYxIiBuYW1lPSJQb3RlbnRpYWwgQ3JlZCBUaGVmdCYjMTA7KEFkZCAyIHB
vaW50KSI+CiAgICAgIDxicG1uOmluY29taW5nPkZsb3dfMTE1a2hwaTwvYnBtbjppbmNvbWluZz4KICAgICAgPGJwbW46b3V0Z29pbmc+R
mxvd18wY2QwMHE3PC9icG1uOm91dGdvaW5nPgogICAgPC9icG1uOnNlcnZpY2VUYXNrPgogICAgPGJwbW46c2VxdWVuY2VGbG93IGlkPSJ
GbG93XzAza29ycjgiIG5hbWU9Im5vIiBzb3VyY2VSZWY9IkdhdGV3YXlfMDRzMGV2ZCIgdGFyZ2V0UmVmPSJFdmVudF8xYnMzMmlqIiAvP
gogICAgPGJwbW46c2VxdWVuY2VGbG93IGlkPSJGbG93XzExNWtocGkiIG5hbWU9InllcyIgc291cmNlUmVmPSJHYXRld2F5XzA0czBldmQ
iIHRhcmdldFJlZj0iQWN0aXZpdHlfMGs1NG52MSIgLz4KICAgIDxicG1uOnNlcXVlbmNlRmxvdyBpZD0iRmxvd18waGVpOWx6IiBzb3VyY
2VSZWY9IkV2ZW50XzE4cDRvbGwiIHRhcmdldFJlZj0iR2F0ZXdheV8xdm43MGVkIiAvPgogICAgPGJwbW46cGFyYWxsZWxHYXRld2F5IGl
kPSJHYXRld2F5XzF2bjcwZWQiPgogICAgICA8YnBtbjppbmNvbWluZz5GbG93XzBoZWk5bHo8L2JwbW46aW5jb21pbmc+CiAgICAgIDxic
G1uOm91dGdvaW5nPkZsb3dfMHdkZTFmMjwvYnBtbjpvdXRnb2luZz4KICAgICAgPGJwbW46b3V0Z29pbmc+Rmxvd18wbXc4b2JzPC9icG1
uOm91dGdvaW5nPgogICAgPC9icG1uOnBhcmFsbGVsR2F0ZXdheT4KICAgIDxicG1uOnNlcXVlbmNlRmxvdyBpZD0iRmxvd18wd2RlMWYyI
iBzb3VyY2VSZWY9IkdhdGV3YXlfMXZuNzBlZCIgdGFyZ2V0UmVmPSJBY3Rpdml0eV8xNjIwYjE1IiAvPgogICAgPGJwbW46ZXhjbHVzaXZ
lR2F0ZXdheSBpZD0iR2F0ZXdheV8wajJyeXYzIiBuYW1lPSJXYXMgdGhlIGhvc3QgYXNzb2NpYXRlZCB3aXRoIG90aGVyIGFsZXJ0cyAod
2l0aGluIDEgZGF5KT8iPgogICAgICA8YnBtbjppbmNvbWluZz5GbG93XzEzamNoeTI8L2JwbW46aW5jb21pbmc+CiAgICAgIDxicG1uOm9
1dGdvaW5nPkZsb3dfMG4waGJveTwvYnBtbjpvdXRnb2luZz4KICAgICAgPGJwbW46b3V0Z29pbmc+Rmxvd18wcTlieWpuPC9icG1uOm91d
GdvaW5nPgogICAgPC9icG1uOmV4Y2x1c2l2ZUdhdGV3YXk+CiAgICA8YnBtbjpzZXF1ZW5jZUZsb3cgaWQ9IkZsb3dfMTNqY2h5MiIgc29
1cmNlUmVmPSJBY3Rpdml0eV8xNjIwYjE1IiB0YXJnZXRSZWY9IkdhdGV3YXlfMGoycnl2MyIgLz4KICAgIDxicG1uOmVuZEV2ZW50IGlkP
SJFdmVudF8xd2h5dDd3IiBuYW1lPSJTdG9wIj4KICAgICAgPGJwbW46aW5jb21pbmc+Rmxvd18wbjBoYm95PC9icG1uOmluY29taW5nPgo
gICAgPC9icG1uOmVuZEV2ZW50PgogICAgPGJwbW46c2VxdWVuY2VGbG93IGlkPSJGbG93XzBuMGhib3kiIG5hbWU9Im5vIiBzb3VyY2VSZ
WY9IkdhdGV3YXlfMGoycnl2MyIgdGFyZ2V0UmVmPSJFdmVudF8xd2h5dDd3IiAvPgogICAgPGJwbW46c2VydmljZVRhc2sgaWQ9IkFjdGl
2aXR5XzBkMDRvcHAiIG5hbWU9IlBvdGVudGlhbCBBdHRhY2sgQ2xlYW51cCYjMTA7KEFkZCAyIHBvaW50KSI+CiAgICAgIDxicG1uOmluY
29taW5nPkZsb3dfMHE5YnlqbjwvYnBtbjppbmNvbWluZz4KICAgICAgPGJwbW46b3V0Z29pbmc+Rmxvd18waGVtcTI4PC9icG1uOm91dGd
vaW5nPgogICAgPC9icG1uOnNlcnZpY2VUYXNrPgogICAgPGJwbW46c2VxdWVuY2VGbG93IGlkPSJGbG93XzBxOWJ5am4iIG5hbWU9Inllc
yIgc291cmNlUmVmPSJHYXRld2F5XzBqMnJ5djMiIHRhcmdldFJlZj0iQWN0aXZpdHlfMGQwNG9wcCIgLz4KICAgIDxicG1uOnBhcmFsbGV
sR2F0ZXdheSBpZD0iR2F0ZXdheV8wcnZ6eGt4Ij4KICAgICAgPGJwbW46aW5jb21pbmc+Rmxvd18wbWE0ajh5PC9icG1uOmluY29taW5nP
gogICAgICA8YnBtbjppbmNvbWluZz5GbG93XzE3emlmdWk8L2JwbW46aW5jb21pbmc+CiAgICAgIDxicG1uOmluY29taW5nPkZsb3dfMTJ
sYXM4aTwvYnBtbjppbmNvbWluZz4KICAgICAgPGJwbW46aW5jb21pbmc+Rmxvd18wY2QwMHE3PC9icG1uOmluY29taW5nPgogICAgICA8Y
nBtbjppbmNvbWluZz5GbG93XzBoZW1xMjg8L2JwbW46aW5jb21pbmc+CiAgICAgIDxicG1uOm91dGdvaW5nPkZsb3dfMTkwazZ6ZDwvYnB
tbjpvdXRnb2luZz4KICAgIDwvYnBtbjpwYXJhbGxlbEdhdGV3YXk+CiAgICA8YnBtbjpleGNsdXNpdmVHYXRld2F5IGlkPSJHYXRld2F5X
zAxeXU3cGQiIG5hbWU9IkhhdmUgYWxsIGNoZWNrcyBleGVjdXRlZCBpbiB0aGUgY2FzZT8iPgogICAgICA8YnBtbjppbmNvbWluZz5GbG9
3XzE5MGs2emQ8L2JwbW46aW5jb21pbmc+CiAgICAgIDxicG1uOmluY29taW5nPkZsb3dfMGl3Z2thZjwvYnBtbjppbmNvbWluZz4KICAgI
CAgPGJwbW46b3V0Z29pbmc+Rmxvd18wZGV3Y3U1PC9icG1uOm91dGdvaW5nPgogICAgICA8YnBtbjpvdXRnb2luZz5GbG93XzB6amFmOTE
8L2JwbW46b3V0Z29pbmc+CiAgICA8L2JwbW46ZXhjbHVzaXZlR2F0ZXdheT4KICAgIDxicG1uOnNlcXVlbmNlRmxvdyBpZD0iRmxvd18xO
TBrNnpkIiBzb3VyY2VSZWY9IkdhdGV3YXlfMHJ2enhreCIgdGFyZ2V0UmVmPSJHYXRld2F5XzAxeXU3cGQiIC8+CiAgICA8YnBtbjpzZXF
1ZW5jZUZsb3cgaWQ9IkZsb3dfMGRld2N1NSIgbmFtZT0ibm8iIHNvdXJjZVJlZj0iR2F0ZXdheV8wMXl1N3BkIiB0YXJnZXRSZWY9IkV2Z
W50XzFrdnNnNTQiIC8+CiAgICA8YnBtbjppbnRlcm1lZGlhdGVDYXRjaEV2ZW50IGlkPSJFdmVudF8xa3ZzZzU0IiBuYW1lPSJXYWl0IDE
gbWludXRlIj4KICAgICAgPGJwbW46aW5jb21pbmc+Rmxvd18wZGV3Y3U1PC9icG1uOmluY29taW5nPgogICAgICA8YnBtbjpvdXRnb2luZ
z5GbG93XzBpd2drYWY8L2JwbW46b3V0Z29pbmc+CiAgICAgIDxicG1uOnRpbWVyRXZlbnREZWZpbml0aW9uIGlkPSJUaW1lckV2ZW50RGV
maW5pdGlvbl8xbHl5a2F0IiAvPgogICAgPC9icG1uOmludGVybWVkaWF0ZUNhdGNoRXZlbnQ+CiAgICA8YnBtbjpzZXF1ZW5jZUZsb3cga
WQ9IkZsb3dfMGl3Z2thZiIgc291cmNlUmVmPSJFdmVudF8xa3ZzZzU0IiB0YXJnZXRSZWY9IkdhdGV3YXlfMDF5dTdwZCIgLz4KICAgIDx
icG1uOnNlcXVlbmNlRmxvdyBpZD0iRmxvd18wemphZjkxIiBuYW1lPSJ5ZXMiIHNvdXJjZVJlZj0iR2F0ZXdheV8wMXl1N3BkIiB0YXJnZ
XRSZWY9IkFjdGl2aXR5XzF2NHBjbzciIC8+CiAgICA8YnBtbjpzZXJ2aWNlVGFzayBpZD0iQWN0aXZpdHlfMXY0cGNvNyIgbmFtZT0iVGF
```

```
sbHkgUG9pbnRzIj4KICAgICAgPGJwbW46aW5jb21pbmc+Rmxvd18wemphZjkxPC9icG1uOmluY29taW5nPgogICAgICA8YnBtbjpvdXRnb
2luZz5GbG93XzFrZWtyMTM8L2JwbW46b3V0Z29pbmc+CiAgICA8L2JwbW46c2VydmljZVRhc2s+CiAgICA8YnBtbjplbmRFdmVudCBpZD0
iRXZlbnRfMHU1ejdubyIgbmFtZT0iU3RvcCI+CiAgICAgIDxicG1uOmluY29taW5nPkZsb3dfMTY3dTA1NjwvYnBtbjppbmNvbWluZz4KI
CAgIDwvYnBtbjplbmRFdmVudD4KICAgIDxicG1uOmV4Y2x1c2l2ZUdhdGV3YXkgaWQ9IkdhdGV3YXlfMDh6OHJncSIgbmFtZT0iTW9yZSB
0aGFuIDEgUG9pbnQ/Ij4KICAgICAgPGJwbW46aW5jb21pbmc+Rmxvd18xa2VrcjEzPC9icG1uOmluY29taW5nPgogICAgICA8YnBtbjpvd
XRnb2luZz5GbG93XzE2N3UwNTY8L2JwbW46b3V0Z29pbmc+CiAgICAgIDxicG1uOm91dGdvaW5nPkZsb3dfMWRtOGZxZDwvYnBtbjpvdXR
nb2luZz4KICAgIDwvYnBtbjpleGNsdXNpdmVHYXRld2F5PgogICAgPGJwbW46c2VxdWVuY2VGbG93IGlkPSJGbG93XzFrZWtyMTMiIHNvd
XJjZVJlZj0iQWN0aXZpdHlfMXY0cGNvNyIgdGFyZ2V0UmVmPSJHYXRld2F5XzA4ejhyZ3EiIC8+CiAgICA8YnBtbjpzZXF1ZW5jZUZsb3c
gaWQ9IkZsb3dfMTY3dTA1NiIgbmFtZT0ibm8iIHNvdXJjZVJlZj0iR2F0ZXdheV8wOHo4cmdxIiB0YXJnZXRSZWY9IkV2ZW50XzB1NXo3b
m8iIC8+CiAgICA8YnBtbjpleGNsdXNpdmVHYXRld2F5IGlkPSJHYXRld2F5XzBoZ25sbXIiIG5hbWU9Ik1vcmUgdGhhbiAzIHBvaW50cz8
iPgogICAgICA8YnBtbjppbmNvbWluZz5GbG93XzFkbThmcWQ8L2JwbW46aW5jb21pbmc+CiAgICAgIDxicG1uOm91dGdvaW5nPkZsb3dfM
HFhaXozOTwvYnBtbjpvdXRnb2luZz4KICAgICAgPGJwbW46b3V0Z29pbmc+Rmxvd18xZXNlbTg0PC9icG1uOm91dGdvaW5nPgogICAgPC9
icG1uOmV4Y2x1c2l2ZUdhdGV3YXk+CiAgICA8YnBtbjpzZXF1ZW5jZUZsb3cgaWQ9IkZsb3dfMWRtOGZxZCIgbmFtZT0ieWVzIiBzb3VyY
2VSZWY9IkdhdGV3YXlfMDh6OHJncSIgdGFyZ2V0UmVmPSJHYXRld2F5XzBoZ25sbXIiIC8+CiAgICA8YnBtbjpzZXF1ZW5jZUZsb3cgaWQ
9IkZsb3dfMHFhaXozOSIgbmFtZT0ibm8iIHNvdXJjZVJlZj0iR2F0ZXdheV8waGdubG1yIiB0YXJnZXRSZWY9IkFjdGl2aXR5XzEwMjQ4N
zMiIC8+CiAgICA8YnBtbjpzZXJ2aWNlVGFzayBpZD0iQWN0aXZpdHlfMTAyNDg3MyIgbmFtZT0iQ3JlYXRlIExvdyBQcmlvcml0eSBDYXN
lIj4KICAgICAgPGJwbW46aW5jb21pbmc+Rmxvd18wcWFpejM5PC9icG1uOmluY29taW5nPgogICAgICA8YnBtbjpvdXRnb2luZz5GbG93X
zFsNm5xazI8L2JwbW46b3V0Z29pbmc+CiAgICA8L2JwbW46c2VydmljZVRhc2s+CiAgICA8YnBtbjpzZXJ2aWNlVGFzayBpZD0iQWN0aXZ
pdHlfMXc5YnpxaiIgbmFtZT0iQ3JlYXRlIEhpZ2ggUHJpb3JpdHkgQ2FzZSI+CiAgICAgIDxicG1uOmluY29taW5nPkZsb3dfMWVzZW04N
DwvYnBtbjppbmNvbWluZz4KICAgICAgPGJwbW46b3V0Z29pbmc+Rmxvd18xYXE3ODU3PC9icG1uOm91dGdvaW5nPgogICAgPC9icG1uOnN
lcnZpY2VUYXNrPgogICAgPGJwbW46c2VxdWVuY2VGbG93IGlkPSJGbG93XzFlc2VtODQiIG5hbWU9InllcyIgc291cmNlUmVmPSJHYXRld
2F5XzBoZ25sbXIiIHRhcmdldFJlZj0iQWN0aXZpdHlfMXc5YnpxaiIgLz4KICAgIDxicG1uOnNlcXVlbmNlRmxvdyBpZD0iRmxvd18xYXE
3ODU3IiBzb3VyY2VSZWY9IkFjdGl2aXR5XzF3OWJ6cWoiIHRhcmdldFJlZj0iQWN0aXZpdHlfMGc1cTM3cSIgLz4KICAgIDxicG1uOnNlb
mRUYXNrIGlkPSJBY3Rpdml0eV8wZzVxMzdxIiBuYW1lPSJOb3RpZnkgU2VjdXJpdHkgT3BlcmF0b3IiPgogICAgICA8YnBtbjppbmNvbWl
uZz5GbG93XzFhcTc4NTc8L2JwbW46aW5jb21pbmc+CiAgICAgIDxicG1uOm91dGdvaW5nPkZsb3dfMWZrb3Y3azwvYnBtbjpvdXRnb2luZ
z4KICAgIDwvYnBtbjpzZW5kVGFzaz4KICAgIDxicG1uOmVuZEV2ZW50IGlkPSJFdmVudF8wZmdrOTNjIiBuYW1lPSJTdG9wIj4KICAgICA
gPGJwbW46aW5jb21pbmc+Rmxvd18xZmtvdjdrPC9icG1uOmluY29taW5nPgogICAgPC9icG1uOmVuZEV2ZW50PgogICAgPGJwbW46c2Vxd
WVuY2VGbG93IGlkPSJGbG93XzFma292N2siIHNvdXJjZVJlZj0iQWN0aXZpdHlfMGc1cTM3cSIgdGFyZ2V0UmVmPSJFdmVudF8wZmdrOTN
jIiAvPgogICAgPGJwbW46c2VuZFRhc2sgaWQ9IkFjdGl2aXR5XzF5aXliMmoiIG5hbWU9Ik5vdGlmeSBTZWN1cml0eSBPcGVyYXRvciI+C
iAgICAgIDxicG1uOmluY29taW5nPkZsb3dfMWw2bnFrMjwvYnBtbjppbmNvbWluZz4KICAgICAgPGJwbW46b3V0Z29pbmc+Rmxvd18wZGc
zdW9lPC9icG1uOm91dGdvaW5nPgogICAgPC9icG1uOnNlbmRUYXNrPgogICAgPGJwbW46ZW5kRXZlbnQgaWQ9IkV2ZW50XzBvc3IzbGkiI
G5hbWU9IlN0b3AiPgogICAgICA8YnBtbjppbmNvbWluZz5GbG93XzBkZzN1b2U8L2JwbW46aW5jb21pbmc+CiAgICA8L2JwbW46ZW5kRXZ
lbnQ+CiAgICA8YnBtbjpzZXF1ZW5jZUZsb3cgaWQ9IkZsb3dfMGRnM3VvZSIgc291cmNlUmVmPSJBY3Rpdml0eV8xeWl5YjJqIiB0YXJnZ
XRSZWY9IkV2ZW50XzBvc3IzbGkiIC8+CiAgICA8YnBtbjpzZXF1ZW5jZUZsb3cgaWQ9IkZsb3dfMWw2bnFrMiIgc291cmNlUmVmPSJBY3R
pdml0eV8xMDI0ODczIiB0YXJnZXRSZWY9IkFjdGl2aXR5XzF5aXliMmoiIC8+CiAgICA8YnBtbjpzZXF1ZW5jZUZsb3cgaWQ9IkZsb3dfM
GdhdHJzYyIgc291cmNlUmVmPSJBY3Rpdml0eV8xZ2QxbHltIiB0YXJnZXRSZWY9IkdhdGV3YXlfMWo2b2VxbiIgLz4KICAgIDxicG1uOnN
lcXVlbmNlRmxvdyBpZD0iRmxvd18xdnM4bzM4IiBzb3VyY2VSZWY9IkFjdGl2aXR5XzFveGl5NW8iIHRhcmdldFJlZj0iR2F0ZXdheV8xa
zhvY2k3IiAvPgogICAgPGJwbW46c2VxdWVuY2VGbG93IGlkPSJGbG93XzFwamVrYWMiIHNvdXJjZVJlZj0iR2F0ZXdheV8wMHFrZ24xIiB
0YXJnZXRSZWY9IkFjdGl2aXR5XzFubGY1OG0iIC8+CiAgICA8YnBtbjpzZXF1ZW5jZUZsb3cgaWQ9IkZsb3dfMDB3eGpneiIgc291cmNlU
mVmPSJHYXRld2F5XzB5aXIwNzQiIHRhcmdldFJlZj0iQWN0aXZpdHlfMW5sZjU4bSIgLz4KICAgIDxicG1uOnNlcXVlbmNlRmxvdyBpZD0
iRmxvd18wbm1pZGh1IiBzb3VyY2VSZWY9IkdhdGV3YXlfMTE3MjNvMyIgdGFyZ2V0UmVmPSJBY3Rpdml0eV8xbmxmNThtIiAvPgogICAgP
GJwbW46c2VxdWVuY2VGbG93IGlkPSJGbG93XzA2cWZwamIiIHNvdXJjZVJlZj0iR2F0ZXdheV8wc3JvZmQwIiB0YXJnZXRSZWY9IkFjdGl
2aXR5XzFubGY1OG0iIC8+CiAgICA8YnBtbjpzZXF1ZW5jZUZsb3cgaWQ9IkZsb3dfMG13OG9icyIgc291cmNlUmVmPSJHYXRld2F5XzF2b
jcwZWQiIHRhcmdldFJlZj0iQWN0aXZpdHlfMW5sZjU4bSIgLz4KICAgIDxicG1uOnNlcXVlbmNlRmxvdyBpZD0iRmxvd18wbWE0ajh5IiB
zb3VyY2VSZWY9IkFjdGl2aXR5XzE2aTJ3cTIiIHRhcmdldFJlZj0iR2F0ZXdheV8wcnZ6eGt4IiAvPgogICAgPGJwbW46c2VxdWVuY2VGb
G93IGlkPSJGbG93XzE3emlmdWkiIHNvdXJjZVJlZj0iQWN0aXZpdHlfMHcxdTVqOSIgdGFyZ2V0UmVmPSJHYXRld2F5XzBydnp4a3giIC8
+CiAgICA8YnBtbjpzZXF1ZW5jZUZsb3cgaWQ9IkZsb3dfMTJsYXM4aSIgc291cmNlUmVmPSJBY3Rpdml0eV8xZnh0ejIyIiB0YXJnZXRSZ
WY9IkdhdGV3YXlfMHJ2enhreCIgLz4KICAgIDxicG1uOnNlcXVlbmNlRmxvdyBpZD0iRmxvd18wY2QwMHE3IiBzb3VyY2VSZWY9IkFjdGl
2aXR5XzBrNTRudjEiIHRhcmdldFJlZj0iR2F0ZXdheV8wcnZ6eGt4IiAvPgogICAgPGJwbW46c2VxdWVuY2VGbG93IGlkPSJGbG93XzBoZ
W1xMjgiIHNvdXJjZVJlZj0iQWN0aXZpdHlfMGQwNG9wcCIgdGFyZ2V0UmVmPSJHYXRld2F5XzBydnp4a3giIC8+CiAgPC9icG1uOnByb2N
lc3M+CiAgPGJwbW5kaTpCUE1ORGlhZ3JhbSBpZD0iQlBNTkRpYWdyYW1fMSI+CiAgICA8YnBtbmRpOkJQTU5QbGFuZSBpZD0iQlBNTlBsY
W5lXzEiIGJwbW5FbGVtZW50PSJQcm9jZXNzXzBkaHd4eHUiPgogICAgICA8YnBtbmRpOkJQTU5TaGFwZSBpZD0iQlBNTlNoYXBlXzBxbnE
xcWsiIGJwbW5FbGVtZW50PSJFdmVudF8weDZjZDMxIiBiaW9jOnN0cm9rZT0iIzQzYTA0NyIgYmlvYzpmaWxsPSIjYzhlNmM5IiBjb2xvc
jpiYWNrZ3JvdW5kLWNvbG9yPSIjYzhlNmM5IiBjb2xvcjpib3JkZXItY29sb3I9IiM0M2EwNDciPgogICAgICAgIDxkYzpCb3VuZHMgeD0
iMjgyIiB5PSIyNzIiIHdpZHRoPSIzNiIgaGVpZ2h0PSIzNiIgLz4KICAgICAgICA8YnBtbmRpOkJQTU5MYWJlbD4KICAgICAgICAgIDxkY
zpCb3VuZHMgeD0iMTc1IiB5PSIyNzAiIHdpZHRoPSI4OSIgaGVpZ2h0PSI0MCIgLz4KICAgICAgICA8L2JwbW5kaTpCUE1OTGFiZWw+CiA
gICAgIDwvYnBtbmRpOkJQTU5TaGFwZT4KICAgICAgPGJwbW5kaTpCUE1OU2hhcGUgaWQ9IkJQTU5TaGFwZV8xbWxzY2xzIiBicG1uRWxlb
WVudD0iRXZlbnRfMHd2enl0byIgYmlvYzpzdHJva2U9IiM0M2EwNDciIGJpb2M6ZmlsbD0iI2M4ZTZjOSIgY29sb3I6YmFja2dyb3VuZC1
jb2xvcj0iI2M4ZTZjOSIgY29sb3I6Ym9yZGVyLWNvbG9yPSIjNDNhMDQ3Ij4KICAgICAgICA8ZGM6Qm91bmRzIHg9IjU0MiIgeT0iMjcyI
iB3aWR0aD0iMzYiIGhlaWdodD0iMzYiIC8+CiAgICAgICAgPGJwbW5kaTpCUE1OTGFiZWw+CiAgICAgICAgICA8ZGM6Qm91bmRzIHg9IjQ
1MSIgeT0iMjYzIiB3aWR0aD0iNzUiIGhlaWdodD0iNTMiIC8+CiAgICAgICAgPC9icG1uZGk6QlBNTkxhYmVsPgogICAgICA8L2JwbW5ka
TpCUE1OU2hhcGU+CiAgICAgIDxicG1uZGk6QlBNTlNoYXBlIGlkPSJFdmVudF8xeTV2YjRzX2RpIiBicG1uRWxlbWVudD0iRXZlbnRfMXZ
1ZmFkayIgYmlvYzpzdHJva2U9IiM0M2EwNDciIGJpb2M6ZmlsbD0iI2M4ZTZjOSIgY29sb3I6YmFja2dyb3VuZC1jb2xvcj0iI2M4ZTZjO
SIgY29sb3I6Ym9yZGVyLWNvbG9yPSIjNDNhMDQ3Ij4KICAgICAgICA8ZGM6Qm91bmRzIHg9IjgwMiIgeT0iMjcyIiB3aWR0aD0iMzYiIGh
laWdodD0iMzYiIC8+CiAgICAgICAgPGJwbW5kaTpCUE1OTGFiZWw+CiAgICAgICAgICA8ZGM6Qm91bmRzIHg9IjcwNiIgeT0iMjcwIiB3a
WR0aD0iNjgiIGhlaWdodD0iMjciIC8+CiAgICAgICAgPC9icG1uZGk6QlBNTkxhYmVsPgogICAgICA8L2JwbW5kaTpCUE1OU2hhcGU+CiA
gICAgIDxicG1uZGk6QlBNTlNoYXBlIGlkPSJCUE1OU2hhcGVfMDRpNmV3dSIgYnBtbkVsZW1lbnQ9IkV2ZW50XzFmN2FlYjciIGJpb2M6c
3Ryb2tlPSIjNDNhMDQ3IiBiaW9jOmZpbGw9IiNjOGU2YzkiIGNvbG9yOmJhY2tncm91bmQtY29sb3I9IiNjOGU2YzkiIGNvbG9yOmJvcmR
```

lci1jb2xvcj0iIzQzYTA0NyI+CiAgICAgICAgPGRjOkJvdW5kcyB4PSIxMDMyIiB5PSIyNzIiIHdpZHRoPSIzNiIgaGVpZ2h0PSIzNiIgL
z4KICAgICAgICA8YnBtbmRpOkJQTU5MYWJlbD4KICAgICAgICAgIDxkYzpCb3VuZHMgeD0iMTA2NSIgeT0iMjYzIiB3aWR0aD0iODkiIGh
laWdodD0iMjciIC8+CiAgICAgICAgPC9icG1uZGk6QlBNTkxhYmVsPgogICAgICA8L2JwbW5kaTpCUE1OU2hhcGU+CiAgICAgIDxicG1uZ
Gk6QlBNTlNoYXBlIGlkPSJCUE1OU2hhcGVfMTRkenA5MiIgYnBtbkVsZW1lbnQ9IkFjdGl2aXR5XzFnZDFseW0iPgogICAgICAgIDxkYzp
Cb3VuZHMgeD0iMjUwIiB5PSI0MzAiIHdpZHRoPSIxMDAiIGhlaWdodD0iODAiIC8+CiAgICAgICAgPGJwbW5kaTpCUE1OTGFiZWwgLz4KI
CAgICAgPC9icG1uZGk6QlBNTlNoYXBlPgogICAgICA8YnBtbmRpOkJQTU5TaGFwZSBpZD0iQlBNTlNoYXBlXzBkZXZ0MGMiIGJwbW5FbGV
tZW50PSJBY3Rpdml0eV8xb3hpeTVvIj4KICAgICAgICA8ZGM6Qm91bmRzIHg9IjUxMCIgeT0iNDMwIiB3aWR0aD0iMTAwIiBoZWlnaHQ9I
jgwIiAvPgogICAgICAgIDxicG1uZGk6QlBNTkxhYmVsIC8+CiAgICAgIDwvYnBtbmRpOkJQTU5TaGFwZT4KICAgICAgPGJwbW5kaTpCUE1
OU2hhcGUgaWQ9IkJQTU5TaGFwZV8wcmRnNWNxIiBicG1uRWxlbWVudD0iQWN0aXZpdHlfMHI5eWlsNiI+CiAgICAgICAgPGRjOkJvdW5kc
yB4PSI3NzAiIHk9IjQzMCIgd2lkdGg9IjEwMCIgaGVpZ2h0PSI4MCIgLz4KICAgICAgICA8YnBtbmRpOkJQTU5MYWJlbCAvPgogICAgICA
8L2JwbW5kaTpCUE1OU2hhcGU+CiAgICAgIDxicG1uZGk6QlBNTlNoYXBlIGlkPSJCUE1OU2hhcGVfMHZtaWYyciIgYnBtbkVsZW1lbnQ9I
kFjdGl2aXR5XzFwZDhhdDMiPgogICAgICAgIDxkYzpCb3VuZHMgeD0iMTAwMCIgeT0iNDMwIiB3aWR0aD0iMTAwIiBoZWlnaHQ9IjgwIiA
vPgogICAgICAgIDxicG1uZGk6QlBNTkxhYmVsIC8+CiAgICAgIDwvYnBtbmRpOkJQTU5TaGFwZT4KICAgICAgPGJwbW5kaTpCUE1OU2hhc
GUgaWQ9IkdhdGV3YXlfMWo2b2Vxbl9kaSIgYnBtbkVsZW1lbnQ9IkdhdGV3YXlfMWo2b2VxbiIgaXNNYXJrZXJWaXNpYmxlPSJ0cnVlIj4
KICAgICAgICA8ZGM6Qm91bmRzIHg9IjI3NSIgeT0iNjE1IiB3aWR0aD0iNTAiIGhlaWdodD0iNTAiIC8+CiAgICAgICAgPGJwbW5kaTpCU
E1OTGFiZWw+CiAgICAgICAgICA8ZGM6Qm91bmRzIHg9IjIwNSIgeT0iNTIzIiB3aWR0aD0iODkiIGhlaWdodD0iOTMiIC8+CiAgICAgICA
gPC9icG1uZGk6QlBNTkxhYmVsPgogICAgICA8L2JwbW5kaTpCUE1OU2hhcGU+CiAgICAgIDxicG1uZGk6QlBNTlNoYXBlIGlkPSJBY3Rpd
ml0eV8weW9ubzdxX2RpIiBicG1uRWxlbWVudD0iQWN0aXZpdHlfMWZ4dHoyMiIgYmlvYzpzdHJva2U9IiMxZTg4ZTUiIGJpb2M6ZmlsbD0
iI2JiZGVmYiIgY29sb3I6YmFja2dyb3VuZC1jb2xvcj0iI2JiZGVmYiIgY29sb3I6Ym9yZGVyLWNvbG9yPSIjMWU4OGU1Ij4KICAgICAgI
CA8ZGM6Qm91bmRzIHg9IjI1MCIgeT0iNzIwIiB3aWR0aD0iMTAwIiBoZWlnaHQ9IjgwIiAvPgogICAgICAgIDxicG1uZGk6QlBNTkxhYmV
sIC8+CiAgICAgIDwvYnBtbmRpOkJQTU5TaGFwZT4KICAgICAgPGJwbW5kaTpCUE1OU2hhcGUgaWQ9IkJQTU5TaGFwZV8xaGJmam1zIiBic
G1uRWxlbWVudD0iRXZlbnRfMXVvcWQ2OCIgYmlvYzpzdHJva2U9IiNlNTM5MzUiIGJpb2M6ZmlsbD0iI2ZmY2RkMiIgY29sb3I6YmFja2d
yb3VuZC1jb2xvcj0iI2ZmY2RkMiIgY29sb3I6Ym9yZGVyLWNvbG9yPSIjZTUzOTM1Ij4KICAgICAgICA8ZGM6Qm91bmRzIHg9IjE1MiIge
T0iNjIyIiB3aWR0aD0iMzYiIGhlaWdodD0iMzYiIC8+CiAgICAgICAgPGJwbW5kaTpCUE1OTGFiZWw+CiAgICAgICAgICA8ZGM6Qm91bmR
zIHg9IjE1OSIgeT0iNjY1IiB3aWR0aD0iMjMiIGhlaWdodD0iMTQiIC8+CiAgICAgICAgPC9icG1uZGk6QlBNTkxhYmVsPgogICAgICA8L
2JwbW5kaTpCUE1OU2hhcGU+CiAgICAgIDxicG1uZGk6QlBNTlNoYXBlIGlkPSJCUE1OU2hhcGVfMWJjcTM3aSIgYnBtbkVsZW1lbnQ9Ikd
hdGV3YXlfMWs4b2NpNyIgaXNNYXJrZXJWaXNpYmxlPSJ0cnVlIj4KICAgICAgICA8ZGM6Qm91bmRzIHg9IjUzNSIgeT0iNjE1IiB3aWR0a
D0iNTAiIGhlaWdodD0iNTAiIC8+CiAgICAgICAgPGJwbW5kaTpCUE1OTGFiZWw+CiAgICAgICAgICA8ZGM6Qm91bmRzIHg9IjQ2NSIgeT0
iNTEzIiB3aWR0aD0iODkiIGhlaWdodD0iOTMiIC8+CiAgICAgICAgPC9icG1uZGk6QlBNTkxhYmVsPgogICAgICA8L2JwbW5kaTpCUE1OU
2hhcGU+CiAgICAgIDxicG1uZGk6QlBNTlNoYXBlIGlkPSJCUE1OU2hhcGVfMHBrbGl4YSIgYnBtbkVsZW1lbnQ9IkFjdGl2aXR5XzB3MXU
1ajkiIGJpb2M6c3Ryb2tlPSIjMWU4OGU1IiBiaW9jOmZpbGw9IiNiYmRlZmIiIGNvbG9yOmJhY2tncm91bmQtY29sb3I9IiNiYmRlZmIiI
GNvbG9yOmJvcmRlci1jb2xvcj0iIzFlODhlNSI+CiAgICAgICAgPGRjOkJvdW5kcyB4PSI1MTAiIHk9IjcyMCIgd2lkdGg9IjEwMCIgaGV
pZ2h0PSI4MCIgLz4KICAgICAgICA8YnBtbmRpOkJQTU5MYWJlbCAvPgogICAgICA8L2JwbW5kaTpCUE1OU2hhcGU+CiAgICAgIDxicG1uZ
Gk6QlBNTlNoYXBlIGlkPSJCUE1OU2hhcGVfMGF2YzlhNyIgYnBtbkVsZW1lbnQ9IkV2ZW50XzBtam4wczIiIGJpb2M6c3Ryb2tlPSIjZTU
zOTM1IiBiaW9jOmZpbGw9IiNmZmNkZDIiIGNvbG9yOmJhY2tncm91bmQtY29sb3I9IiNmZmNkZDIiIGNvbG9yOmJvcmRlci1jb2xvcj0iI
2U1MzkzNSI+CiAgICAgICAgPGRjOkJvdW5kcyB4PSI0NTIiIHk9IjYyMiIgd2lkdGg9IjM2IiBoZWlnaHQ9IjM2IiAvPgogICAgICAgIDx
icG1uZGk6QlBNTkxhYmVsPgogICAgICAgICAgPGRjOkJvdW5kcyB4PSI0NTgiIHk9IjY2MyIgd2lkdGg9IjIzIiBoZWlnaHQ9IjE0IiAvP
gogICAgICAgIDwvYnBtbmRpOkJQTU5MYWJlbD4KICAgICAgPC9icG1uZGk6QlBNTlNoYXBlPgogICAgICA8YnBtbmRpOkJQTU5TaGFwZSB
pZD0iQlBNTlNoYXBlXzE2azZxMzMiIGJwbW5FbGVtZW50PSJHYXRld2F5XzE1MnNhczAiIGlzTWFya2VyVmlzaWJsZT0idHJ1ZSI+CiAgI
CAgICAgPGRjOkJvdW5kcyB4PSI3OTUiIHk9IjYxNSIgd2lkdGg9IjUwIiBoZWlnaHQ9IjUwIiAvPgogICAgICAgIDxicG1uZGk6QlBNTkx
hYmVsPgogICAgICAgICAgPGRjOkJvdW5kcyB4PSI3MzIiIHk9IjUzNiIgd2lkdGg9Ijc2IiBoZWlnaHQ9IjgwIiAvPgogICAgICAgIDwvY
nBtbmRpOkJQTU5MYWJlbD4KICAgICAgPC9icG1uZGk6QlBNTlNoYXBlPgogICAgICA8YnBtbmRpOkJQTU5TaGFwZSBpZD0iQlBNTlNoYXB
lXzB4YTdxNXAiIGJwbW5FbGVtZW50PSJBY3Rpdml0eV8xNmkyd3EyIiBiaW9jOnN0cm9rZT0iIzFlODhlNSIgYmlvYzpmaWxsPSIjYmJkZ
WZiIiBjb2xvcjpiYWNrZ3JvdW5kLWNvbG9yPSIjYmJkZWZiIiBjb2xvcjpib3JkZXItY29sb3I9IiMxZTg4ZTUiPgogICAgICAgIDxkYzp
Cb3VuZHMgeD0iNzcwIiB5PSI3MjAiIHdpZHRoPSIxMDAiIGhlaWdodD0iODAiIC8+CiAgICAgICAgPGJwbW5kaTpCUE1OTGFiZWwgLz4KI
CAgICAgPC9icG1uZGk6QlBNTlNoYXBlPgogICAgICA8YnBtbmRpOkJQTU5TaGFwZSBpZD0iQlBNTlNoYXBlXzA0d3V2MGgiIGJwbW5FbGV
tZW50PSJFdmVudF8xdHRoNmp3IiBiaW9jOnN0cm9rZT0iI2U1MzkzNSIgYmlvYzpmaWxsPSIjZmZjZGQyIiBjb2xvcjpiYWNrZ3JvdW5kL
WNvbG9yPSIjZmZjZGQyIiBjb2xvcjpib3JkZXItY29sb3I9IiNlNTM5MzUiPgogICAgICAgIDxkYzpCb3VuZHMgeD0iNjYyIiB5PSI2MjI
iIHdpZHRoPSIzNiIgaGVpZ2h0PSIzNiIgLz4KICAgICAgICA8YnBtbmRpOkJQTU5MYWJlbD4KICAgICAgICAgIDxkYzpCb3VuZHMgeD0iN
jY5IiB5PSI2NjUiIHdpZHRoPSIyMyIgaGVpZ2h0PSIxNCIgLz4KICAgICAgICA8L2JwbW5kaTpCUE1OTGFiZWw+CiAgICAgIDwvYnBtbmR
pOkJQTU5TaGFwZT4KICAgICAgPGJwbW5kaTpCUE1OU2hhcGUgaWQ9IkFjdGl2aXR5XzB3YzdidTdfZGkiIGJwbW5FbGVtZW50PSJBY3Rpd
ml0eV8xbmxmNThtIj4KICAgICAgICA8ZGM6Qm91bmRzIHg9Ijg4MCIgeT0iODAiIHdpZHRoPSIxMDAiIGhlaWdodD0iODAiIC8+CiAgICA
gICAgPGJwbW5kaTpCUE1OTGFiZWwgLz4KICAgICAgPC9icG1uZGk6QlBNTlNoYXBlPgogICAgICA8YnBtbmRpOkJQTU5TaGFwZSBpZD0iR
2F0ZXdheV8wMDRxbXBqX2RpIiBicG1uRWxlbWVudD0iR2F0ZXdheV8xMTcyM28zIj4KICAgICAgICA8ZGM6Qm91bmRzIHg9IjI3NSIgeT0
iMzQ1IiB3aWR0aD0iNTAiIGhlaWdodD0iNTAiIC8+CiAgICAgIDwvYnBtbmRpOkJQTU5TaGFwZT4KICAgICAgPGJwbW5kaTpCUE1OU2hhc
GUgaWQ9IkdhdGV3YXlfMXBoZ3I3OV9kaSIgYnBtbkVsZW1lbnQ9IkdhdGV3YXlfMHlpcjA3NCI+CiAgICAgICAgPGRjOkJvdW5kcyB4PSI
1MzUiIHk9IjM0NSIgd2lkdGg9IjUwIiBoZWlnaHQ9IjUwIiAvPgogICAgICA8L2JwbW5kaTpCUE1OU2hhcGU+CiAgICAgIDxicG1uZGk6Q
lBNTlNoYXBlIGlkPSJHYXRld2F5XzBuMjhiMTRfZGkiIGJwbW5FbGVtZW50PSJHYXRld2F5XzAwcWtnbjEiPgogICAgICAgIDxkYzpCb3V
uZHMgeD0iNzk1IiB5PSIzNDUiIHdpZHRoPSI1MCIgaGVpZ2h0PSI1MCIgLz4KICAgICAgPC9icG1uZGk6QlBNTlNoYXBlPgogICAgICA8Y
nBtbmRpOkJQTU5TaGFwZSBpZD0iR2F0ZXdheV8wcnhjZTF5X2RpIiBicG1uRWxlbWVudD0iR2F0ZXdheV8wc3JvZmQwIj4KICAgICAgICA
8ZGM6Qm91bmRzIHg9IjEwMjUiIHk9IjM0NSIgd2lkdGg9IjUwIiBoZWlnaHQ9IjUwIiAvPgogICAgICA8L2JwbW5kaTpCUE1OU2hhcGU+C
iAgICAgIDxicG1uZGk6QlBNTlNoYXBlIGlkPSJCUE1OU2hhcGVfMGw1am44OCIgYnBtbkVsZW1lbnQ9IkdhdGV3YXlfMDRzMGV2ZCIgaXN
NYXJrZXJWaXNpYmxlPSJ0cnVlIj4KICAgICAgICA8ZGM6Qm91bmRzIHg9IjEwMjUiIHk9IjYxNSIgd2lkdGg9IjUwIiBoZWlnaHQ9IjUwI
iAvPgogICAgICAgIDxicG1uZGk6QlBNTkxhYmVsPgogICAgICAgICAgPGRjOkJvdW5kcyB4PSI5NjAiIHk9IjU3NiIgd2lkdGg9Ijg2IiB
oZWlnaHQ9IjI3IiAvPgogICAgICAgIDwvYnBtbmRpOkJQTU5MYWJlbD4KICAgICAgPC9icG1uZGk6QlBNTlNoYXBlPgogICAgICA8YnBtb
mRpOkJQTU5TaGFwZSBpZD0iQlBNTlNoYXBlXzBlaWU1MW8iIGJwbW5FbGVtZW50PSJFdmVudF8xYnMzMmlqIiBiaW9jOnN0cm9rZT0iI2U
1MzkzNSIgYmlvYzpmaWxsPSIjZmZjZGQyIiBjb2xvcjpiYWNrZ3JvdW5kLWNvbG9yPSIjZmZjZGQyIiBjb2xvcjpib3JkZXItY29sb3I9I
iNlNTM5MzUiPgogICAgICAgIDxkYzpCb3VuZHMgeD0iOTQ5IiB5PSI2MjIiIHdpZHRoPSIzNiIgaGVpZ2h0PSIzNiIgLz4KICAgICAgICA

```
8YnBtbmRpOkJQTU5MYWJlbD4KICAgICAgICAgIDxkYzpCb3VuZHMgeD0iOTU2IiB5PSI2NjUiIHdpZHRoPSIyMyIgaGVpZ2h0PSIxNCIgL
z4KICAgICAgICA8L2JwbW5kaTpCUE1OTGFiZWw+CiAgICAgIDwvYnBtbmRpOkJQTU5TaGFwZT4KICAgICAgPGJwbW5kaTpCUE1OU2hhcGU
gaWQ9IkJQTU5TaGFwZV8xcHczM2U4IiBicG1uRWxlbWVudD0iQWN0aXZpdHlfMGs1NG52MSIgYmlvYzpzdHJva2U9IiMxZTg4ZTUiIGJpb
2M6ZmlsbD0iI2JiZGVmYiIgY29sb3I6YmFja2dyb3VuZC1jb2xvcj0iI2JiZGVmYiIgY29sb3I6Ym9yZGVyLWNvbG9yPSIjMWU4OGU1Ij4
KICAgICAgICA8ZGM6Qm91bmRzIHg9IjEwMDAiIHk9IjcyMCIgd2lkdGg9IjEwMCIgaGVpZ2h0PSI4MCIgLz4KICAgICAgICA8YnBtbmRpO
kJQTU5MYWJlbCAvPgogICAgICA8L2JwbW5kaTpCUE1OU2hhcGU+CiAgICAgIDxicG1uZGk6QlBNTlNoYXBlIGlkPSJHYXRld2F5XzExdjR
0cW9fZGkiIGJwbW5FbGVtZW50PSJHYXRld2F5XzBydnp4a3giPgogICAgICAgIDxkYzpCb3VuZHMgeD0iOTA1IiB5PSI5NzUiIHdpZHRoP
SI1MCIgaGVpZ2h0PSI1MCIgLz4KICAgICAgPC9icG1uZGk6QlBNTlNoYXBlPgogICAgICA8YnBtbmRpOkJQTU5TaGFwZSBpZD0iR2F0ZXd
heV8wMXl1N3BkX2RpIiBicG1uRWxlbWVudD0iR2F0ZXdheV8wMXl1N3BkIiBpc01hcmtlclZpc2libGU9InRydWUiPgogICAgICAgIDxkY
zpCb3VuZHMgeD0iOTA1IiB5PSIxMDc1IiB3aWR0aD0iNTAiIGhlaWdodD0iNTAiIC8+CiAgICAgICAgPGJwbW5kaTpCUE1OTGFiZWw+CiA
gICAgICAgICA8ZGM6Qm91bmRzIHg9IjgxMSIgeT0iMTA4MCIgd2lkdGg9Ijc4IiBoZWlnaHQ9IjQwIiAvPgogICAgICAgIDwvYnBtbmRpO
kJQTU5MYWJlbD4KICAgICAgPC9icG1uZGk6QlBNTlNoYXBlPgogICAgICA8YnBtbmRpOkJQTU5TaGFwZSBpZD0iRXZlbnRfMGUxZDMyOV9
kaSIgYnBtbkVsZW1lbnQ9IkV2ZW50XzFrdnNnNTQiIGJpb2M6c3Ryb2tlPSIjZmI4YzAwIiBiaW9jOmZpbGw9IiNmZmUwYjIiIGNvbG9yO
mJhY2tncm91bmQtY29sb3I9IiNmZmUwYjIiIGNvbG9yOmJvcmRlci1jb2xvcj0iI2ZiOGMwMCI+CiAgICAgICAgPGRjOkJvdW5kcyB4PSI
xMDUyIiB5PSIxMDgyIiB3aWR0aD0iMzYiIGhlaWdodD0iMzYiIC8+CiAgICAgICAgPGJwbW5kaTpCUE1OTGFiZWw+CiAgICAgICAgICA8Z
GM6Qm91bmRzIHg9IjEwMzciIHk9IjExMjUiIHdpZHRoPSI2NyIgaGVpZ2h0PSIxNCIgLz4KICAgICAgICA8L2JwbW5kaTpCUE1OTGFiZWw
+CiAgICAgIDwvYnBtbmRpOkJQTU5TaGFwZT4KICAgICAgPGJwbW5kaTpCUE1OU2hhcGUgaWQ9IkFjdGl2aXR5XzFqcWF0a2xfZGkiIGJwb
W5FbGVtZW50PSJBY3Rpdml0eV8xdjRwY283Ij4KICAgICAgICA8ZGM6Qm91bmRzIHg9Ijg4MCIgeT0iMTE3MCIgd2lkdGg9IjEwMCIgaGV
pZ2h0PSI4MCIgLz4KICAgICAgICA8YnBtbmRpOkJQTU5MYWJlbCAvPgogICAgICA8L2JwbW5kaTpCUE1OU2hhcGU+CiAgICAgIDxicG1uZ
Gk6QlBNTlNoYXBlIGlkPSJCUE1OU2hhcGVfMXYyYzRwaSIgYnBtbkVsZW1lbnQ9IkV2ZW50XzB1NXo3bm8iIGJpb2M6c3Ryb2tlPSIjZTU
zOTM1IiBiaW9jOmZpbGw9IiNmZmNkZDIiIGNvbG9yOmJhY2tncm91bmQtY29sb3I9IiNmZmNkZDIiIGNvbG9yOmJvcmRlci1jb2xvcj0iI
2U1MzkzNSI+CiAgICAgICAgPGRjOkJvdW5kcyB4PSI4MjIiIHk9IjEzMDIiIHdpZHRoPSIzNiIgaGVpZ2h0PSIzNiIgLz4KICAgICAgICA
8YnBtbmRpOkJQTU5MYWJlbD4KICAgICAgICAgIDxkYzpCb3VuZHMgeD0iODI5IiB5PSIxMzQ1IiB3aWR0aD0iMjMiIGhlaWdodD0iMTQiI
C8+CiAgICAgICAgPC9icG1uZGk6QlBNTkxhYmVsPgogICAgICA8L2JwbW5kaTpCUE1OU2hhcGU+CiAgICAgIDxicG1uZGk6QlBNTlNoYXB
lIGlkPSJHYXRld2F5XzA4ejhyZ3FfZGkiIGJwbW5FbGVtZW50PSJHYXRld2F5XzA4ejhyZ3EiIGlzTWFya2VyVmlzaWJsZT0idHJ1ZSI+C
iAgICAgICAgPGRjOkJvdW5kcyB4PSI5MDUiIHk9IjEyOTUiIHdpZHRoPSI1MCIgaGVpZ2h0PSI1MCIgLz4KICAgICAgICA8YnBtbmRpOkJ
QTU5MYWJlbD4KICAgICAgICAgIDxkYzpCb3VuZHMgeD0iOTY1IiB5PSIxMzA3IiB3aWR0aD0iNTkiIGhlaWdodD0iMjciIC8+CiAgICAgI
CAgPC9icG1uZGk6QlBNTkxhYmVsPgogICAgICA8L2JwbW5kaTpCUE1OU2hhcGU+CiAgICAgIDxicG1uZGk6QlBNTlNoYXBlIGlkPSJHYXR
ld2F5XzBoZ25sbXJfZGkiIGJwbW5FbGVtZW50PSJHYXRld2F5XzBoZ25sbXIiIGlzTWFya2VyVmlzaWJsZT0idHJ1ZSI+CiAgICAgICAgP
GRjOkJvdW5kcyB4PSI5MDUiIHk9IjEzOTUiIHdpZHRoPSI1MCIgaGVpZ2h0PSI1MCIgLz4KICAgICAgICA8YnBtbmRpOkJQTU5MYWJlbD4
KICAgICAgICAgIDxkYzpCb3VuZHMgeD0iOTAwIiB5PSIxNDU1IiB3aWR0aD0iNTkiIGhlaWdodD0iMjciIC8+CiAgICAgICAgPC9icG1uZ
Gk6QlBNTkxhYmVsPgogICAgICA8L2JwbW5kaTpCUE1OU2hhcGU+CiAgICAgIDxicG1uZGk6QlBNTlNoYXBlIGlkPSJBY3Rpdml0eV8wYm1
venkxX2RpIiBicG1uRWxlbWVudD0iQWN0aXZpdHlfMTAyNDg3MyI+CiAgICAgICAgPGRjOkJvdW5kcyB4PSI3NjAiIHk9IjE0NjAiIHdpZ
HRoPSIxMDAiIGhlaWdodD0iODAiIC8+CiAgICAgICAgPGJwbW5kaTpCUE1OTGFiZWwgLz4KICAgICAgPC9icG1uZGk6QlBNTlNoYXBlPgo
gICAgICA8YnBtbmRpOkJQTU5TaGFwZSBpZD0iQlBNTlNoYXBlXzB4MTBucDkiIGJwbW5FbGVtZW50PSJBY3Rpdml0eV8xdzlienFqIj4KI
CAgICAgICA8ZGM6Qm91bmRzIHg9IjEwMDAiIHk9IjE0NjAiIHdpZHRoPSIxMDAiIGhlaWdodD0iODAiIC8+CiAgICAgICAgPGJwbW5kaTp
CUE1OTGFiZWwgLz4KICAgICAgPC9icG1uZGk6QlBNTlNoYXBlPgogICAgICA8YnBtbmRpOkJQTU5TaGFwZSBpZD0iQWN0aXZpdHlfMGk1b
DB1cV9kaSIgYnBtbkVsZW1lbnQ9IkFjdGl2aXR5XzBnNXEzN3EiPgogICAgICAgIDxkYzpCb3VuZHMgeD0iMTAwMCIgeT0iMTU4MCIgd2l
kdGg9IjEwMCIgaGVpZ2h0PSI4MCIgLz4KICAgICAgICA8YnBtbmRpOkJQTU5MYWJlbCAvPgogICAgICA8L2JwbW5kaTpCUE1OU2hhcGU+C
iAgICAgIDxicG1uZGk6QlBNTlNoYXBlIGlkPSJCUE1OU2hhcGVfMHhqc2t5cyIgYnBtbkVsZW1lbnQ9IkV2ZW50XzBmZ2s5M2MiIGJpb2M
6c3Ryb2tlPSIjZTUzOTM1IiBiaW9jOmZpbGw9IiNmZmNkZDIiIGNvbG9yOmJhY2tncm91bmQtY29sb3I9IiNmZmNkZDIiIGNvbG9yOmJvc
mRlci1jb2xvcj0iI2U1MzkzNSI+CiAgICAgICAgPGRjOkJvdW5kcyB4PSIxMDMyIiB5PSIxNzAyIiB3aWR0aD0iMzYiIGhlaWdodD0iMzY
iIC8+CiAgICAgICAgPGJwbW5kaTpCUE1OTGFiZWw+CiAgICAgICAgICA8ZGM6Qm91bmRzIHg9IjEwMzkiIHk9IjE3NDUiIHdpZHRoPSIyM
yIgaGVpZ2h0PSIxNCIgLz4KICAgICAgICA8L2JwbW5kaTpCUE1OTGFiZWw+CiAgICAgIDwvYnBtbmRpOkJQTU5TaGFwZT4KICAgICAgPGJ
wbW5kaTpCUE1OU2hhcGUgaWQ9IkJQTU5TaGFwZV8xM3MwcGplIiBicG1uRWxlbWVudD0iQWN0aXZpdHlfMXlpeWIyaiI+CiAgICAgICAgP
GRjOkJvdW5kcyB4PSI3NjAiIHk9IjE1ODAiIHdpZHRoPSIxMDAiIGhlaWdodD0iODAiIC8+CiAgICAgICAgPGJwbW5kaTpCUE1OTGFiZWw
gLz4KICAgICAgPC9icG1uZGk6QlBNTlNoYXBlPgogICAgICA8YnBtbmRpOkJQTU5TaGFwZSBpZD0iQlBNTlNoYXBlXzFiczVxMDMiIGJwb
W5FbGVtZW50PSJFdmVudF8wb3NyM2xpIiBiaW9jOnN0cm9rZT0iI2U1MzkzNSIgYmlvYzpmaWxsPSIjZmZjZGQyIiBjb2xvcjpiYWNrZ3J
vdW5kLWNvbG9yPSIjZmZjZGQyIiBjb2xvcjpib3JkZXItY29sb3I9IiNlNTM5MzUiPgogICAgICAgIDxkYzpCb3VuZHMgeD0iNzkyIiB5P
SIxNzAyIiB3aWR0aD0iMzYiIGhlaWdodD0iMzYiIC8+CiAgICAgICAgPGJwbW5kaTpCUE1OTGFiZWw+CiAgICAgICAgICA8ZGM6Qm91bmR
zIHg9Ijc5OSIgeT0iMTc0NSIgd2lkdGg9IjIzIiBoZWlnaHQ9IjE0IiAvPgogICAgICAgIDwvYnBtbmRpOkJQTU5MYWJlbD4KICAgICAgP
C9icG1uZGk6QlBNTlNoYXBlPgogICAgICA8YnBtbmRpOkJQTU5TaGFwZSBpZD0iQlBNTlNoYXBlXzBwZDI5c2MiIGJwbW5FbGVtZW50PSJ
FdmVudF8xOHA0b2xsIiBiaW9jOnN0cm9rZT0iIzQzYTA0NyIgYmlvYzpmaWxsPSIjYzhlNmM5IiBjb2xvcjpiYWNrZ3JvdW5kLWNvbG9yP
SIjYzhlNmM5IiBjb2xvcjpib3JkZXItY29sb3I9IiM0M2EwNDciPgogICAgICAgIDxkYzpCb3VuZHMgeD0iMTI3MiIgeT0iMjcyIiB3aWR
0aD0iMzYiIGhlaWdodD0iMzYiIC8+CiAgICAgICAgPGJwbW5kaTpCUE1OTGFiZWw+CiAgICAgICAgICA8ZGM6Qm91bmRzIHg9IjEzMDkiI
Hk9IjI2MyIgd2lkdGg9IjgxIiBoZWlnaHQ9IjI3IiAvPgogICAgICAgIDwvYnBtbmRpOkJQTU5MYWJlbD4KICAgICAgPC9icG1uZGk6QlB
NTlNoYXBlPgogICAgICA8YnBtbmRpOkJQTU5TaGFwZSBpZD0iQlBNTlNoYXBlXzFtdDRkejYiIGJwbW5FbGVtZW50PSJBY3Rpdml0eV8xN
jIwYjE1Ij4KICAgICAgICA8ZGM6Qm91bmRzIHg9IjEyNDAiIHk9IjQzMCIgd2lkdGg9IjEwMCIgaGVpZ2h0PSI4MCIgLz4KICAgICAgICA
8YnBtbmRpOkJQTU5MYWJlbCAvPgogICAgICA8L2JwbW5kaTpCUE1OU2hhcGU+CiAgICAgIDxicG1uZGk6QlBNTlNoYXBlIGlkPSJHYXRld
2F5XzA0bXN0cW5fZGkiIGJwbW5FbGVtZW50PSJHYXRld2F5XzF2bjcwZWQiPgogICAgICAgIDxkYzpCb3VuZHMgeD0iMTI2NSIgeT0iMzQ
1IiB3aWR0aD0iNTAiIGhlaWdodD0iNTAiIC8+CiAgICAgIDwvYnBtbmRpOkJQTU5TaGFwZT4KICAgICAgPGJwbW5kaTpCUE1OU2hhcGUga
WQ9IkdhdGV3YXlfMGoycnl2M19kaSIgYnBtbkVsZW1lbnQ9IkdhdGV3YXlfMGoycnl2MyIgaXNNYXJrZXJWaXNpYmxlPSJ0cnVlIj4KICA
gICAgICA8ZGM6Qm91bmRzIHg9IjEyNjUiIHk9IjYxNSIgd2lkdGg9IjUwIiBoZWlnaHQ9IjUwIiAvPgogICAgICAgIDxicG1uZGk6QlBNT
kxhYmVsPgogICAgICAgICAgPGRjOkJvdW5kcyB4PSIxMjAwIiB5PSI1NDkiIHdpZHRoPSI3NiIgaGVpZ2h0PSI1MyIgLz4KICAgICAgICA
8L2JwbW5kaTpCUE1OTGFiZWw+CiAgICAgIDwvYnBtbmRpOkJQTU5TaGFwZT4KICAgICAgPGJwbW5kaTpCUE1OU2hhcGUgaWQ9IkJQTU5Ta
GFwZV8waWNpc2w0IiBicG1uRWxlbWVudD0iRXZlbnRfMXdoeXQ3dyIgYmlvYzpzdHJva2U9IiNlNTM5MzUiIGJpb2M6ZmlsbD0iI2ZmY2R
kMiIgY29sb3I6YmFja2dyb3VuZC1jb2xvcj0iI2ZmY2RkMiIgY29sb3I6Ym9yZGVyLWNvbG9yPSIjZTUzOTM1Ij4KICAgICAgICA8ZGM6Q
m91bmRzIHg9IjExNzIiIHk9IjYyMiIgd2lkdGg9IjM2IiBoZWlnaHQ9IjM2IiAvPgogICAgICAgIDxicG1uZGk6QlBNTkxhYmVsPgogICA
```

```
gICAgICAgPGRjOkJvdW5kcyB4PSIxMTc5IiB5PSI2NjUiIHdpZHRoPSIyMyIgaGVpZ2h0PSIxNCIgLz4KICAgICAgICA8L2JwbW5kaTpCU
E1OTGFiZWw+CiAgICAgIDwvYnBtbmRpOkJQTU5TaGFwZT4KICAgICAgPGJwbW5kaTpCUE1OU2hhcGUgaWQ9IkJQTU5TaGFwZV8xNnhjMG9
uIiBicG1uRWxlbWVudD0iQWN0aXZpdHlfMGQwNG9wcCIgYmlvYzpzdHJva2U9IiMxZTg4ZTUiIGJpb2M6ZmlsbD0iI2JiZGVmYiIgY29sb
3I6YmFja2dyb3VuZC1jb2xvcj0iI2JiZGVmYiIgY29sb3I6Ym9yZGVyLWNvbG9yPSIjMWU4OGU1Ij4KICAgICAgICA8ZGM6Qm91bmRzIHg
9IjEyNDAiIHk9IjcyMCIgd2lkdGg9IjEwMCIgaGVpZ2h0PSI4MCIgLz4KICAgICAgICA8YnBtbmRpOkJQTU5MYWJlbCAvPgogICAgICA8L
2JwbW5kaTpCUE1OU2hhcGU+CiAgICAgIDxicG1uZGk6QlBNTkVkZ2UgaWQ9IkZsb3dfMDRzZjBnZ19kaSIgYnBtbkVsZW1lbnQ9IkZsb3d
fMDRzZjBnZyI+CiAgICAgICAgPGRpOndheXBvaW50IHg9IjMwMCIgeT0iNjY1IiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSIzMDAiI
Hk9IjcyMCIgLz4KICAgICAgICA8YnBtbmRpOkJQTU5MYWJlbD4KICAgICAgICAgIDxkYzpCb3VuZHMgeD0iMzAyIiB5PSI2ODYiIHdpZHR
oPSIxOCIgaGVpZ2h0PSIxNCIgLz4KICAgICAgICA8L2JwbW5kaTpCUE1OTGFiZWw+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgI
CA8YnBtbmRpOkJQTU5FZGdlIGlkPSJGbG93XzBrZXhwYmxfZGkiIGJwbW5FbGVtZW50PSJGbG93XzBrZXhwYmwiPgogICAgICAgIDxkaTp
3YXlwb2ludCB4PSIyNzUiIHk9IjY0MCIgLz4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iMTg4IiB5PSI2NDAiIC8+CiAgICAgICAgPGJwb
W5kaTpCUE1OTGFiZWw+CiAgICAgICAgICA8ZGM6Qm91bmRzIHg9IjIwMyIgeT0iNjE4IiB3aWR0aD0iMTMiIGhlaWdodD0iMTQiIC8+CiA
gICAgICAgPC9icG1uZGk6QlBNTkxhYmVsPgogICAgICA8L2JwbW5kaTpCUE1ORWRnZT4KICAgICAgPGJwbW5kaTpCUE1ORWRnZSBpZD0iQ
lBNTkVkZ2VfMXU5dDgyYyIgYnBtbkVsZW1lbnQ9IkZsb3dfMXFucTkwMiI+CiAgICAgICAgPGRpOndheXBvaW50IHg9IjU2MCIgeT0iNjY
1IiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI1NjAiIHk9IjcyMCIgLz4KICAgICAgICA8YnBtbmRpOkJQTU5MYWJlbD4KICAgICAgI
CAgIDxkYzpCb3VuZHMgeD0iNTYyIiB5PSI2ODYiIHdpZHRoPSIxOCIgaGVpZ2h0PSIxNCIgLz4KICAgICAgICA8L2JwbW5kaTpCUE1OTGF
iZWw+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgICA8YnBtbmRpOkJQTU5FZGdlIGlkPSJCUE1ORWRnZV8wcnNlamN3IiBicG1uR
WxlbWVudD0iRmxvd18wN2hiNjgyIj4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iNTM1IiB5PSI2NDAiIC8+CiAgICAgICAgPGRpOndheXB
vaW50IHg9IjQ4OCIgeT0iNjQwIiAvPgogICAgICAgIDxicG1uZGk6QlBNTkxhYmVsPgogICAgICAgICAgPGRjOkJvdW5kcyB4PSI1MDAiI
Hk9IjYxOCIgd2lkdGg9IjEzIiBoZWlnaHQ9IjE0IiAvPgogICAgICAgIDwvYnBtbmRpOkJQTU5MYWJlbD4KICAgICAgPC9icG1uZGk6QlB
NTkVkZ2U+CiAgICAgIDxicG1uZGk6QlBNTkVkZ2UgaWQ9IkJQTU5FZGdlXzFrb2tqeWQiIGJwbW5FbGVtZW50PSJGbG93XzBsNzZ2M2siP
gogICAgICAgIDxkaTp3YXlwb2ludCB4PSI4MjAiIHk9IjY2NSIgLz4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iODIwIiB5PSI3MjAiIC8
+CiAgICAgICAgPGJwbW5kaTpCUE1OTGFiZWw+CiAgICAgICAgICA8ZGM6Qm91bmRzIHg9IjgyMiIgeT0iNjg2IiB3aWR0aD0iMTgiIGhla
WdodD0iMTQiIC8+CiAgICAgICAgPC9icG1uZGk6QlBNTkxhYmVsPgogICAgICA8L2JwbW5kaTpCUE1ORWRnZT4KICAgICAgPGJwbW5kaTp
CUE1ORWRnZSBpZD0iQlBNTkVkZ2VfMHl0bzB1NSIgYnBtbkVsZW1lbnQ9IkZsb3dfMWptbHM3aCI+CiAgICAgICAgPGRpOndheXBvaW50I
Hg9Ijc5NSIgeT0iNjQwIiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI2OTgiIHk9IjY0MCIgLz4KICAgICAgICA8YnBtbmRpOkJQTU5
MYWJlbD4KICAgICAgICAgIDxkYzpCb3VuZHMgeD0iNzExIiB5PSI2MTgiIHdpZHRoPSIxMyIgaGVpZ2h0PSIxNCIgLz4KICAgICAgICA8L
2JwbW5kaTpCUE1OTGFiZWw+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgICA8YnBtbmRpOkJQTU5FZGdlIGlkPSJGbG93XzBtMm0
4bzJfZGkiIGJwbW5FbGVtZW50PSJGbG93XzBtMm04bzIiPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI4MjAiIHk9IjUxMCIgLz4KICAgI
CAgICA8ZGk6d2F5cG9pbnQgeD0iODIwIiB5PSI2MTUiIC8+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgICA8YnBtbmRpOkJQTU5
FZGdlIGlkPSJGbG93XzBrN2J4NXZfZGkiIGJwbW5FbGVtZW50PSJGbG93XzBrN2J4NXYiPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSIzM
DAiIHk9IjMwOCIgLz4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iMzAwIiB5PSIzNDUiIC8+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgo
gICAgICA8YnBtbmRpOkJQTU5FZGdlIGlkPSJGbG93XzBjZWdpMW1fZGkiIGJwbW5FbGVtZW50PSJGbG93XzBjZWdpMW0iPgogICAgICAgI
DxkaTp3YXlwb2ludCB4PSIzMDAiIHk9IjM5NSIgLz4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iMzAwIiB5PSI0MzAiIC8+CiAgICAgIDw
vYnBtbmRpOkJQTU5FZGdlPgogICAgICA8YnBtbmRpOkJQTU5FZGdlIGlkPSJGbG93XzFncXloYTZfZGkiIGJwbW5FbGVtZW50PSJGbG93X
zFncXloYTYiPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI1NjAiIHk9IjMwOCIgLz4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iNTYwIiB
5PSIzNDUiIC8+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgICA8YnBtbmRpOkJQTU5FZGdlIGlkPSJGbG93XzB5dzU5NnVfZGkiI
GJwbW5FbGVtZW50PSJGbG93XzB5dzU5NnUiPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI1NjAiIHk9IjM5NSIgLz4KICAgICAgICA8ZGk
6d2F5cG9pbnQgeD0iNTYwIiB5PSI0MzAiIC8+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgICA8YnBtbmRpOkJQTU5FZGdlIGlkP
SJGbG93XzB1aTg1Y2tfZGkiIGJwbW5FbGVtZW50PSJGbG93XzB1aTg1Y2siPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI4MjAiIHk9IjM
wOCIgLz4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iODIwIiB5PSIzNDUiIC8+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgICA8Y
nBtbmRpOkJQTU5FZGdlIGlkPSJGbG93XzFidHFqMzlfZGkiIGJwbW5FbGVtZW50PSJGbG93XzFidHFqMzkiPgogICAgICAgIDxkaTp3YXl
wb2ludCB4PSI4MjAiIHk9IjM5NSIgLz4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iODIwIiB5PSI0MzAiIC8+CiAgICAgIDwvYnBtbmRpO
kJQTU5FZGdlPgogICAgICA8YnBtbmRpOkJQTU5FZGdlIGlkPSJGbG93XzBnemh5MmpfZGkiIGJwbW5FbGVtZW50PSJGbG93XzBnemh5Mmo
iPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSIxMDUwIiB5PSIzMDgiIC8+CiAgICAgICAgPGRpOndheXBvaW50IHg9IjEwNTAiIHk9IjM0N
SIgLz4KICAgICAgPC9icG1uZGk6QlBNTkVkZ2U+CiAgICAgIDxicG1uZGk6QlBNTkVkZ2UgaWQ9IkZsb3dfMXg1OGVteF9kaSIgYnBtbkV
sZW1lbnQ9IkZsb3dfMXg1OGVteCI+CiAgICAgICAgPGRpOndheXBvaW50IHg9IjEwNTAiIHk9IjM5NSIgLz4KICAgICAgICA8ZGk6d2F5c
G9pbnQgeD0iMTA1MCIgeT0iNDMwIiAvPgogICAgICA8L2JwbW5kaTpCUE1ORWRnZT4KICAgICAgPGJwbW5kaTpCUE1ORWRnZSBpZD0iRmx
vd18wYmdtc2owX2RpIiBicG1uRWxlbWVudD0iRmxvd18wYmdtc2owIj4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iMTA1MCIgeT0iNTEwI
iAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSIxMDUwIiB5PSI2MTUiIC8+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgICA8YnB
tbmRpOkJQTU5FZGdlIGlkPSJCUE1ORWRnZV8xZGd3M2w1IiBicG1uRWxlbWVudD0iRmxvd18wM2tvcnI4Ij4KICAgICAgICA8ZGk6d2F5c
G9pbnQgeD0iMTAyNSIgeT0iNjQwIiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI5ODUiIHk9IjY0MCIgLz4KICAgICAgICA8YnBtbmR
pOkJQTU5MYWJlbD4KICAgICAgICAgIDxkYzpCb3VuZHMgeD0iOTk2IiB5PSI2MTgiIHdpZHRoPSIxMyIgaGVpZ2h0PSIxNCIgLz4KICAgI
CAgICA8L2JwbW5kaTpCUE1OTGFiZWw+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgICA8YnBtbmRpOkJQTU5FZGdlIGlkPSJCUE1
ORWRnZV8wdmYyamhoIiBicG1uRWxlbWVudD0iRmxvd18xMTVraHBpIj4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iMTA1MCIgeT0iNjY1I
iAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSIxMDUwIiB5PSI3MjAiIC8+CiAgICAgICAgPGJwbW5kaTpCUE1OTGFiZWw+CiAgICAgICA
gICA8ZGM6Qm91bmRzIHg9IjEwNTYiIHk9IjY4OSIgd2lkdGg9IjE4IiBoZWlnaHQ9IjE0IiAvPgogICAgICAgIDwvYnBtbmRpOkJQTU5MY
WJlbD4KICAgICAgPC9icG1uZGk6QlBNTkVkZ2U+CiAgICAgIDxicG1uZGk6QlBNTkVkZ2UgaWQ9IkZsb3dfMTkwazZ6ZF9kaSIgYnBtbkV
sZW1lbnQ9IkZsb3dfMTkwazZ6ZCI+CiAgICAgICAgPGRpOndheXBvaW50IHg9IjkzMCIgeT0iMTAyNSIgLz4KICAgICAgICA8ZGk6d2F5c
G9pbnQgeD0iOTMwIiB5PSIxMDc1IiAvPgogICAgICA8L2JwbW5kaTpCUE1ORWRnZT4KICAgICAgPGJwbW5kaTpCUE1ORWRnZSBpZD0iRmx
vd18wZGV3Y3U1X2RpIiBicG1uRWxlbWVudD0iRmxvd18wZGV3Y3U1Ij4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iOTQ1IiB5PSIxMTEwI
iAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSIxMDU1IiB5PSIxMTEwIiAvPgogICAgICAgIDxicG1uZGk6QlBNTkxhYmVsPgogICAgICA
gICAgPGRjOkJvdW5kcyB4PSI5OTQiIHk9IjEwOTIiIHdpZHRoPSIxMyIgaGVpZ2h0PSIxNCIgLz4KICAgICAgICA8L2JwbW5kaTpCUE1OT
GFiZWw+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgICA8YnBtbmRpOkJQTU5FZGdlIGlkPSJGbG93XzBpd2drYWZfZGkiIGJwbW5
FbGVtZW50PSJGbG93XzBpd2drYWYiPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSIxMDcwIiB5PSIxMDgyIiAvPgogICAgICAgIDxkaTp3Y
Xlwb2ludCB4PSIxMDcwIiB5PSIxMDUwIiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI5NDAiIHk9IjEwNTAiIC8+CiAgICAgICAgPGR
pOndheXBvaW50IHg9Ijk0MCIgeT0iMTA4NSIgLz4KICAgICAgPC9icG1uZGk6QlBNTkVkZ2U+CiAgICAgIDxicG1uZGk6QlBNTkVkZ2Uga
WQ9IkZsb3dfMHpqYWY5MV9kaSIgYnBtbkVsZW1lbnQ9IkZsb3dfMHpqYWY5MSI+CiAgICAgICAgPGRpOndheXBvaW50IHg9IjkzMCIgeT0
```

```
iMTEyNSIgLz4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iOTMwIiB5PSIxMTcwIiAvPgogICAgICAgIDxicG1uZGk6QlBNTkxhYmVsPgogI
CAgICAgICAgPGRjOkJvdW5kcyB4PSI5MzYiIHk9IjExNDUiIHdpZHRoPSIxOCIgaGVpZ2h0PSIxNCIgLz4KICAgICAgICA8L2JwbW5kaTp
CUE1OTGFiZWw+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgICA8YnBtbmRpOkJQTU5FZGdlIGlkPSJGbG93XzFrZWtyMTNfZGkiI
GJwbW5FbGVtZW50PSJGbG93XzFrZWtyMTMiPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI5MzAiIHk9IjEyNTAiIC8+CiAgICAgICAgPGR
pOndheXBvaW50IHg9IjkzMCIgeT0iMTI5NSIgLz4KICAgICAgPC9icG1uZGk6QlBNTkVkZ2U+CiAgICAgIDxicG1uZGk6QlBNTkVkZ2Uga
WQ9IkZsb3dfMTY3dTA1Nl9kaSIgYnBtbkVsZW1lbnQ9IkZsb3dfMTY3dTA1NiI+CiAgICAgICAgPGRpOndheXBvaW50IHg9IjkwNSIgeT0
iMTMyMCIgLz4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iODU4IiB5PSIxMzIwIiAvPgogICAgICAgIDxicG1uZGk6QlBNTkxhYmVsPgogI
CAgICAgICAgPGRjOkJvdW5kcyB4PSI4NzUiIHk9IjEzMDIiIHdpZHRoPSIxMyIgaGVpZ2h0PSIxNCIgLz4KICAgICAgICA8L2JwbW5kaTp
CUE1OTGFiZWw+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgICA8YnBtbmRpOkJQTU5FZGdlIGlkPSJGbG93XzFkbThmcWRfZGkiI
GJwbW5FbGVtZW50PSJGbG93XzFkbThmcWQiPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI5MzAiIHk9IjEzNDUiIC8+CiAgICAgICAgPGR
pOndheXBvaW50IHg9IjkzMCIgeT0iMTM5NSIgLz4KICAgICAgICA8YnBtbmRpOkJQTU5MYWJlbD4KICAgICAgICAgIDxkYzpCb3VuZHMge
D0iOTM2IiB5PSIxMzQ1IiB3aWR0aD0iMTgiIGhlaWdodD0iMTQiIC8+CiAgICAgICAgPC9icG1uZGk6QlBNTkxhYmVsPgogICAgICA8L2J
wbW5kaTpCUE1ORWRnZT4KICAgICAgPGJwbW5kaTpCUE1ORWRnZSBpZD0iRmxvd18wcWFpejM5X2RpIiBicG1uRWxlbWVudD0iRmxvd18wc
WFpejM5Ij4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iOTA1IiB5PSIxNDIwIiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI4MTAiIHk
9IjE0MjAiIC8+CiAgICAgICAgPGRpOndheXBvaW50IHg9IjgxMCIgeT0iMTQ2MCIgLz4KICAgICAgICA8YnBtbmRpOkJQTU5MYWJlbD4KI
CAgICAgICAgIDxkYzpCb3VuZHMgeD0iODUxIiB5PSIxNDAyIiB3aWR0aD0iMTMiIGhlaWdodD0iMTQiIC8+CiAgICAgICAgPC9icG1uZGk
6QlBNTkxhYmVsPgogICAgICA8L2JwbW5kaTpCUE1ORWRnZT4KICAgICAgPGJwbW5kaTpCUE1ORWRnZSBpZD0iRmxvd18xZXNlbTg0X2RpI
iBicG1uRWxlbWVudD0iRmxvd18xZXNlbTg0Ij4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iOTU1IiB5PSIxNDIwIiAvPgogICAgICAgIDx
kaTp3YXlwb2ludCB4PSIxMDUwIiB5PSIxNDIwIiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSIxMDUwIiB5PSIxNDYwIiAvPgogICAgI
CAgIDxicG1uZGk6QlBNTkxhYmVsPgogICAgICAgICAgPGRjOkJvdW5kcyB4PSI5OTQiIHk9IjE0MDIiIHdpZHRoPSIxOCIgaGVpZ2h0PSI
xNCIgLz4KICAgICAgICA8L2JwbW5kaTpCUE1OTGFiZWw+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgICA8YnBtbmRpOkJQTU5FZ
GdlIGlkPSJGbG93XzFhcTc4NTdfZGkiIGJwbW5FbGVtZW50PSJGbG93XzFhcTc4NTciPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSIxMDU
wIiB5PSIxNTQwIiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSIxMDUwIiB5PSIxNTgwIiAvPgogICAgICA8L2JwbW5kaTpCUE1ORWRnZ
T4KICAgICAgPGJwbW5kaTpCUE1ORWRnZSBpZD0iRmxvd18xZmtvdjdrX2RpIiBicG1uRWxlbWVudD0iRmxvd18xZmtvdjdrIj4KICAgICA
gICA8ZGk6d2F5cG9pbnQgeD0iMTA1MCIgeT0iMTY2MCIgLz4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iMTA1MCIgeT0iMTcwMiIgLz4KI
CAgICAgPC9icG1uZGk6QlBNTkVkZ2U+CiAgICAgIDxicG1uZGk6QlBNTkVkZ2UgaWQ9IkJQTU5FZGdlXzEyeXI2NzYiIGJwbW5FbGVtZW5
0PSJGbG93XzBkZzN1b2UiPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI4MTAiIHk9IjE2NjAiIC8+CiAgICAgICAgPGRpOndheXBvaW50I
Hg9IjgxMCIgeT0iMTcwMiIgLz4KICAgICAgPC9icG1uZGk6QlBNTkVkZ2U+CiAgICAgIDxicG1uZGk6QlBNTkVkZ2UgaWQ9IkZsb3dfMWw
2bnFrMl9kaSIgYnBtbkVsZW1lbnQ9IkZsb3dfMWw2bnFrMiI+CiAgICAgICAgPGRpOndheXBvaW50IHg9IjgxMCIgeT0iMTU0MCIgLz4KI
CAgICAgICA8ZGk6d2F5cG9pbnQgeD0iODEwIiB5PSIxNTgwIiAvPgogICAgICA8L2JwbW5kaTpCUE1ORWRnZT4KICAgICAgPGJwbW5kaTp
CUE1ORWRnZSBpZD0iRmxvd18wZ2F0cnNjX2RpIiBicG1uRWxlbWVudD0iRmxvd18wZ2F0cnNjIj4KICAgICAgICA8ZGk6d2F5cG9pbnQge
D0iMzAwIiB5PSI1MTAiIC8+CiAgICAgICAgPGRpOndheXBvaW50IHg9IjMwMCIgeT0iNjE1IiAvPgogICAgICA8L2JwbW5kaTpCUE1ORWR
nZT4KICAgICAgPGJwbW5kaTpCUE1ORWRnZSBpZD0iRmxvd18xdnM4bzM4X2RpIiBicG1uRWxlbWVudD0iRmxvd18xdnM4bzM4Ij4KICAgI
CAgICA8ZGk6d2F5cG9pbnQgeD0iNTYwIiB5PSI1MTAiIC8+CiAgICAgICAgPGRpOndheXBvaW50IHg9IjU2MCIgeT0iNjE1IiAvPgogICA
gICA8L2JwbW5kaTpCUE1ORWRnZT4KICAgICAgPGJwbW5kaTpCUE1ORWRnZSBpZD0iRmxvd18xcGpla2FjX2RpIiBicG1uRWxlbWVudD0iR
mxvd18xcGpla2FjIj4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iODQ1IiB5PSIzNzAiIC8+CiAgICAgICAgPGRpOndheXBvaW50IHg9Ijk
xMCIgeT0iMzcwIiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI5MTAiIHk9IjE2MCIgLz4KICAgICAgPC9icG1uZGk6QlBNTkVkZ2U+C
iAgICAgIDxicG1uZGk6QlBNTkVkZ2UgaWQ9IkZsb3dfMDB3eGpnel9kaSIgYnBtbkVsZW1lbnQ9IkZsb3dfMDB3eGpneiI+CiAgICAgICA
gPGRpOndheXBvaW50IHg9IjU4NSIgeT0iMzcwIiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI2MjAiIHk9IjM3MCIgLz4KICAgICAgI
CA8ZGk6d2F5cG9pbnQgeD0iNjIwIiB5PSIxNTAiIC8+CiAgICAgICAgPGRpOndheXBvaW50IHg9Ijg4MCIgeT0iMTUwIiAvPgogICAgICA
8L2JwbW5kaTpCUE1ORWRnZT4KICAgICAgPGJwbW5kaTpCUE1ORWRnZSBpZD0iRmxvd18wbm1pZGh1X2RpIiBicG1uRWxlbWVudD0iRmxvd
18wbm1pZGh1Ij4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iMzI1IiB5PSIzNzAiIC8+CiAgICAgICAgPGRpOndheXBvaW50IHg9IjM1MCI
geT0iMzcwIiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSIzNTAiIHk9IjEyMCIgLz4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iODgwI
iB5PSIxMjAiIC8+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgICA8YnBtbmRpOkJQTU5FZGdlIGlkPSJGbG93XzA2cWZwamJfZGk
iIGJwbW5FbGVtZW50PSJGbG93XzA2cWZwamIiPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSIxMDI1IiB5PSIzNzAiIC8+CiAgICAgICAgP
GRpOndheXBvaW50IHg9Ijk2MCIgeT0iMzcwIiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI5NjAiIHk9IjE2MCIgLz4KICAgICAgPC9
icG1uZGk6QlBNTkVkZ2U+CiAgICAgIDxicG1uZGk6QlBNTkVkZ2UgaWQ9IkZsb3dfMG13OG9ic19kaSIgYnBtbkVsZW1lbnQ9IkZsb3dfM
G13OG9icyI+CiAgICAgICAgPGRpOndheXBvaW50IHg9IjEyNjUiIHk9IjM3MCIgLz4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iMTE5MCI
geT0iMzcwIiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSIxMTkwIiB5PSIxMjAiIC8+CiAgICAgICAgPGRpOndheXBvaW50IHg9Ijk4M
CIgeT0iMTIwIiAvPgogICAgICA8L2JwbW5kaTpCUE1ORWRnZT4KICAgICAgPGJwbW5kaTpCUE1ORWRnZSBpZD0iRmxvd18wbWE0ajh5X2R
pIiBicG1uRWxlbWVudD0iRmxvd18wbWE0ajh5Ij4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iODcwIiB5PSI3NjAiIC8+CiAgICAgICAgP
GRpOndheXBvaW50IHg9IjkyMCIgeT0iNzYwIiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI5MjAiIHk9Ijk4NSIgLz4KICAgICAgPC9
icG1uZGk6QlBNTkVkZ2U+CiAgICAgIDxicG1uZGk6QlBNTkVkZ2UgaWQ9IkZsb3dfMTd6aWZ1aV9kaSIgYnBtbkVsZW1lbnQ9IkZsb3dfM
Td6aWZ1aSI+CiAgICAgICAgPGRpOndheXBvaW50IHg9IjU2MCIgeT0iODAwIiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI1NjAiIHk
9Ijk5MCIgLz4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iOTE1IiB5PSI5OTAiIC8+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgI
CA8YnBtbmRpOkJQTU5FZGdlIGlkPSJGbG93XzEybGFzOGlfZGkiIGJwbW5FbGVtZW50PSJGbG93XzEybGFzOGkiPgogICAgICAgIDxkaTp
3YXlwb2ludCB4PSIzMDAiIHk9IjgwMCIgLz4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iMzAwIiB5PSIxMDEwIiAvPgogICAgICAgIDxka
Tp3YXlwb2ludCB4PSI5MTUiIHk9IjEwMTAiIC8+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgICA8YnBtbmRpOkJQTU5FZGdlIGl
kPSJGbG93XzBjZDAwcTdfZGkiIGJwbW5FbGVtZW50PSJGbG93XzBjZDAwcTciPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSIxMDAwIiB5P
SI3NjAiIC8+CiAgICAgICAgPGRpOndheXBvaW50IHg9Ijk0MCIgeT0iNzYwIiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSI5NDAiIHk
9Ijk4NSIgLz4KICAgICAgPC9icG1uZGk6QlBNTkVkZ2U+CiAgICAgIDxicG1uZGk6QlBNTkVkZ2UgaWQ9IkZsb3dfMGhlbXEyOF9kaSIgY
nBtbkVsZW1lbnQ9IkZsb3dfMGhlbXEyOCI+CiAgICAgICAgPGRpOndheXBvaW50IHg9IjEyOTAiIHk9IjgwMCIgLz4KICAgICAgICA8ZGk
6d2F5cG9pbnQgeD0iMTI5MCIgeT0iMTAxMCIgLz4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iOTQ1IiB5PSIxMDEwIiAvPgogICAgICA8L
2JwbW5kaTpCUE1ORWRnZT4KICAgICAgPGJwbW5kaTpCUE1ORWRnZSBpZD0iRmxvd18waGVpOWx6X2RpIiBicG1uRWxlbWVudD0iRmxvd18
waGVpOWx6Ij4KICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iMTI5MCIgeT0iMzA4IiAvPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSIxMjkwI
iB5PSIzNDUiIC8+CiAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgICA8YnBtbmRpOkJQTU5FZGdlIGlkPSJGbG93XzB3ZGUxZjJfZGk
iIGJwbW5FbGVtZW50PSJGbG93XzB3ZGUxZjIiPgogICAgICAgIDxkaTp3YXlwb2ludCB4PSIxMjkwIiB5PSIzOTUiIC8+CiAgICAgICAgP
GRpOndheXBvaW50IHg9IjEyOTAiIHk9IjQzMCIgLz4KICAgICAgPC9icG1uZGk6QlBNTkVkZ2U+CiAgICAgIDxicG1uZGk6QlBNTkVkZ2U
```

```
gaWQ9IkZsb3dfMTNqY2h5Ml9kaSIgYnBtbkVsZW1lbnQ9IkZsb3dfMTNqY2h5MiI+CiAgICAgICAgICAgPGRpOndheXBvaW50IHg9IjEyOTAiI
Hk9IjUxMCIgLz4KICAgICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iMTI5MCIgeT0iNjE1IiAvPgogICAgICAgICA8L2JwbW5kaTpCUE1ORWRnZT4KICA
gICAgPGJwbW5kaTpCUE1ORWRnZSBpZD0iRmxvd18wbjBoYm95X2RpIiBicG1uRWxlbWVudD0iRmxvd18wbjBoYm95Ij4KICAgICAgICAgICA8Z
Gk6d2F5cG9pbnQgeD0iMTI2NSIgeT0iNjQwIiAvPgogICAgICAgICAgIDxkaTp3YXlwb2ludCB4PSIxMjA4IiB5PSI2NDAiIC8+CiAgICAgICAgICA
gPGJwbW5kaTpCUE1OTGFiZWw+CiAgICAgICAgICAgICA8ZGM6Qm91bmRzIHg9IjEyMzEiIHk9IjYyMyIgd2lkdGg9IjEzIiBoZWlnaHQ9IjE0I
iAvPgogICAgICAgICAgIDwvYnBtbmRpOkJQTU5MYWJlbD4KICAgICAgICAgPC9icG1uZGk6QlBNTkVkZ2U+CiAgICAgICAgIDxicG1uZGk6QlBNTkVkZ2U
gaWQ9IkZsb3dfMHE5YnlqbDl9kaSIgYnBtbkVsZW1lbnQ9IkZsb3dfMHE5YnlqbiI+CiAgICAgICAgICAgPGRpOndheXBvaW50IHg9IjEyOTAiI
Hk9IjY2NSIgLz4KICAgICAgICAgICA8ZGk6d2F5cG9pbnQgeD0iMTI5MCIgeT0iNzIwIiAvPgogICAgICAgICAgIDxicG1uZGk6QlBNTkxhYmVsPgo
gICAgICAgICAgICAgPGRjOkJvdW5kcyB4PSIxMjk2IiB5PSI2ODciIHdpZHRoPSIxOCIgaGVpZ2h0PSIxNCIgLz4KICAgICAgICAgICA8L2JwbW5ka
TpCUE1OTGFiZWw+CiAgICAgICAgIDwvYnBtbmRpOkJQTU5FZGdlPgogICAgPC9icG1uZGk6QlBNTlBsYW5lPgogIDwvYnBtbmRpOkJQTU5EaWF
ncmFtPgo8L2JwbW46ZGVmaW5pdGlvbnM+Cg==",
      "extensions": {
        "extension-definition--809c4d84-7a6e-4039-97b4-da9fea03fcf9": {
          "extension_type": "new-sdo"
        }
      }
    },
    {
      "id": "x-oca-playbook--447f032b-b463-4e09-a09f-e3610f59a8ab",
      "type": "x-oca-playbook",
      "spec_version": "2.1",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2025-03-03T13:00:00.000Z",
      "modified": "2025-03-03T13:00:00.000Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "name": "Correlate and Score Behaviors",
      "description": "This workflow correlates an observed behavior with related behaviors that may
indicate a living off the land attack. The number of behaviors are tallied into points with a higher score
increasing the likelihood that an attack has been observed. Decode the Base64 string for the playbook
contents.",
      "playbook_creator": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "playbook_creation_time": "2025-03-03T13:00:00.000Z",
      "playbook_modification_time": "2025-03-03T13:00:00.000Z",
      "playbook_format": "application/cacao+json",
      "is_playbook_template": true,
      "playbook_type": [
        "detection",
        "notification"
      ],
      "playbook_impact": 0,
      "playbook_severity": 0,
      "playbook_priority": 0,
      "playbook_bin":
"ewogICJ0eXBlIjogInBsYXlib29rIiwKICAic3BlY192ZXJzaW9uIjogImNhY2FvLTIuMCIsCiAgImlkIjogInBsYXlib29rLS04ZjZlO
GRiZS02ZTcxLTQyNjUtYWNiYS0zZDI4YWQ3ZjAzYTAiLAogICJuYW1lIjogIkxPVEwgQ29ycmVsYXRpb24iLAogICJkZXNjcmlwdGlvbiI
6ICJUaGlzIHBsYXlib29rIGNvcnJlbGF0ZXMgZGlmZmVyZW50IExPVEwgZXZlbnRzIHRvIGNhbGN1bGF0ZSBhIHNjb3JlIGFuZCBwcm9kd
WNlIGEgc2VjdXJpdHkgY2FzZSBpZiBuZWNlc3NhcnkuIiwKICAiY3JlYXRlZF9ieSI6ICJpZGVudGl0eS0tZTZkNmVjMGQtMTZmZi00NDR
kLTg2OWMtODQwNGUxMTE2MTdlIiwKICAiY3JlYXRlZCI6ICIyMDI1LTA4LTA0VDE1OjUzOjU4LjczM1oiLAogICJtb2RpZmllZCI6ICIyM
DI1LTA4LTA0VDE1OjUzOjU4Ljc3N1oiLAogICJyZXZva2VkIjogZmFsc2UsCiAgImRlcml2ZWRfZnJvbSI6IFsKICAgICJwbGF5Ym9vay0
tN2I3MDI3MWItMzRlNS00NGEyLTllZWQtNTIwOGI5ZTZmNTBmIgogIF0sCiAgInBsYXlib29rX3ZhcmlhYmxlcyI6IHsKICAgICJfX2V2Z
W50X3R5cGVfXyI6IHsKICAgICAgInR5cGUiOiAic3RyaW5nIiwKICAgICAgImRlc2NyaXB0aW9uIjogIlRoZSB0eXBlIG9mIGV2ZW50IHR
oYXQgdHJpZ2dlcmVkIHRoZSBwbGF5Ym9vayIsCiAgICAgICJjb25zdGFudCI6IGZhbHNlLAogICAgICAiZXh0ZXJuYWwiOiB0cnVlCiAgI
CB9LAogICAgIl9fcGFyZW50X3Byb2Nlc3Nfc2Vlbl9vbl9zYW1lX2hvc3RfXyI6IHsKICAgICAgInR5cGUiOiAiYm9vbCIsCiAgICAgICJ
kZXNjcmlwdGlvbiI6ICJJZiB0aGUgcGFyZW50IHByb2Nlc3Mgd2FzIHNlZW4gb24gdGhlIHNhbWUgaG9zdCBmb3Igb3RoZXIgYWxlcnRzI
HdpdGhpbiAxIGRheSIsCiAgICAgICJjb25zdGFudCI6IGZhbHNlLAogICAgICAiZXh0ZXJuYWwiOiBmYWxzZQogICAgfSwKICAgICJfX3V
zZXJfb3JfaG9zdF9zYW1lX2FzX3Bvd2Vyc2hlbGxfZW51bWVyYXRpb25fXyI6IHsKICAgICAgInR5cGUiOiAiYm9vbCIsCiAgICAgICJkZ
XNjcmlwdGlvbiI6ICJUcnVlIGlmIHRoZSBhbGVydCdzIHVzZXIgYWNjb3VudCBvciBob3N0IGlzIHRoZSBzYW1lIGFzIGEgUG93ZXJzaGV
sbCBlbnVtZXJhdGlvbiBhbGVydCB3aXRoaW4gMSBkYXkiLAogICAgICAiY29uc3RhbnQiOiBmYWxzZSwKICAgICAgImV4dGVybmFsIjogZ
mFsc2UKICAgIH0sCiAgICAiX19jb3B5X25vdF9wYXJ0X29mX2JhY2t1cF9fIjogewogICAgICAidHlwZSI6ICJib29sIiwKICAgICAgImR
lc2NyaXB0aW9uIjogIlRydWUgaWYgdGhlIGNyZWF0aW9uIG9mIHRoZSBOVERTIGZpbGUgd2FzIG5vdCBwYXJ0IG9mIGEgYmFja3VwIiwKI
CAgICAgImNvbnN0YW50IjogZmFsc2UsCiAgICAgICJleHRlcm5hbCI6IGZhbHNlCiAgICB9LAogICAgIl9fcmRwX2xvZ29uX2Zyb21fbmV
3X3N5c3RlbV9fIjogewogICAgICAidHlwZSI6ICJib29sIiwKICAgICAgImRlc2NyaXB0aW9uIjogIlRydWUgaWYgdGhlIFJEUCBsb2dvb
iBpcyBmcm9tIGEgbmV3IHN5c3RlbSIsCiAgICAgICJjb25zdGFudCI6IGZhbHNlLAogICAgICAiZXh0ZXJuYWwiOiBmYWxzZQogICAgfSw
KICAgICJfX2xvZ3NfZGVsZXRlZF9vbl9jb21wdXRlcl9fIjogewogICAgICAidHlwZSI6ICJib29sIiwKICAgICAgImRlc2NyaXB0aW9uI
jogIlRydWUgaWYgbG9ncyB3ZXJlIGRlbGV0ZWQgb24gdGhlIGNvbXB1dGVyIiwKICAgICAgImNvbnN0YW50IjogZmFsc2UsCiAgICAgICJ
leHRlcm5hbCI6IGZhbHNlCiAgICB9LAogICAgIl9fcG9pbnRzX18iOiB7CiAgICAgICJ0eXBlIjogImludGVnZXIiLAogICAgICAiY29uc
```

```
3RhbnQiOiBmYWxzZSwKICAgICAgImV4dGVybmFsIjogZmFsc2UKICAgIH0KICB9LAogICJ3b3JrZmxvd19zdGFydCI6ICJzdGFydC0tZGE
0MzZlOGQtNWExNi00OWY5LTllMTEtMzkyMGE4Njg4ZWIxIiwKICAid29ya2Zsb3ciOiB7CiAgICAic3RhcnQtLWRhNDM2ZThkLTVhMTYtN
DlmOS05ZTExLTM5MjBhODY4OGViMSI6IHsKICAgICAgIm9uX2NvbXBsZXRpb24iOiAicGFyYWxsZWwtLWUzZWQzY2M1LWZlZmUtNGU3My1
iZGIzLWQzMDI5MTYwZDU4YiIsCiAgICAgICJzdGVwX2V4dGVuc2lvbnMiOiB7CiAgICAgICAgImV4dGVuc2lvbi1kZWZpbml0aW9uLS00M
ThlZTI0Yy05Y2IxLTQ2ZDktYWZhNS0zMDllMDFhYWJjN2YiOiB7CiAgICAgICAgICAidHlwZSI6ICJjb29yZGluYXRlcyIsCiAgICAgICA
gICAieCI6IDE5MCwKICAgICAgICAgICJ5IjogLTYwMCwKICAgICAgICAgICJ3aWR0aCI6IDYwLAogICAgICAgICAgImhlaWdodCI6IDQwC
iAgICAgICAgfQogICAgICB9LAogICAgICAidHlwZSI6ICJzdGFydCIKICAgIH0sCiAgICAic3dpdGNoLWNvbmRpdGlvbi0tYTMwMGMzMDc
tMmZiOC00MTFlLWIwMTktMWE2NWVhYWYxMWQwIjogewogICAgICAibmFtZSI6ICJIYW5kbGUgZXZlbnQgdHlwZSIsCiAgICAgICJzdGVwX
2V4dGVuc2lvbnMiOiB7CiAgICAgICAgImV4dGVuc2lvbi1kZWZpbml0aW9uLS00MThlZTI0Yy05Y2IxLTQ2ZDktYWZhNS0zMDllMDFhYWJ
jN2YiOiB7CiAgICAgICAgICAidHlwZSI6ICJjb29yZGluYXRlcyIsCiAgICAgICAgICAieCI6IDE2MCwKICAgICAgICAgICJ5IjogLTQzM
CwKICAgICAgICAgICJ3aWR0aCI6IDEyMCwKICAgICAgICAgICJoZWlnaHQiOiA2MAogICAgICAgIH0KICAgICAgfSwKICAgICAgInR5cGU
iOiAic3dpdGNoLWNvbmRpdGlvbiIsCiAgICAgICJzd2l0Y2giOiAiX19ldmVudF90eXBlX186dmFsdWUiLAogICAgICAiY2FzZXMiOiB7C
iAgICAgICAgImxvZ3MgZGVsZXRlZCBvbiBjb21wdXRlciI6ICJhY3Rpb24tLTg2YmEyNDgxLTUxNTItNDAzYS1hYzAyLTg2NGRjM2FiMzU
1ZiIsCiAgICAgICAgIm50ZHMgZmlsZSBjb3BpZWQgb24gY29tcHV0ZXIiOiAiYWN0aW9uLS04NWQ0ZjgxNC04MGE2LTRkM2YtOTQ3My04Z
TQ1YmQxNDNlMDgiLAogICAgICAgICJ3aW5ycyBydW5uaW5nIGNvbW1hbmRzIjogImFjdGlvbi0tN2EyM2M3ZTMtOGQyNC00YWI3LWI0ZWM
tMWU2ODM1MGI4ZWRmIiwKICAgICAgICAiY29tcHV0ZXIgdXNlcyBwb3dlcnNoZWxsIHRvIGVudW1lcmF0ZSBuZXR3b3JrIjogImFjdGlvb
i0tZmViNDcyZDktMGZmNy00MTNmLThhZTAtNjJiYzg0ZWE0ZTEyIiwKICAgICAgICAiY29tcHV0ZXIgZ2VuZXJhdGVzIHBhc3N3b3JkIGh
hc2hlcyI6ICJhY3Rpb24tLWViNDUxMzY1LTQ2NjYtNDNjNi05MjY0LWQ1ZDg0N2RiMDY5ZCIKICAgICAgfQogICAgfSwKICAgICJwYXJhb
GxlbC0tZTNlZDNjYzUtZmVmZS00ZTczLWJkYjMtZDMwMjkxNjBkNThiIjogewogICAgICAibmFtZSI6ICJVcGRhdGUgY2FzZSBhbmQgc2N
vcmUgY29ycmVsYXRpb24iLAogICAgICAic3RlcF9leHRlbnNpb25zIjogewogICAgICAgICJleHRlbnNpb24tZGVmaW5pdGlvbi0tNDE4Z
WUyNGMtOWNiMS00NmQ5LWFmYTUtMzA5ZTAxYWFiYzdmIjogewogICAgICAgICAgInR5cGUiOiAiY29vcmRpbmF0ZXMiLAogICAgICAgICA
gIngiOiAxNjAsCiAgICAgICAgICAieSI6IC01MjAsCiAgICAgICAgICAid2lkdGgiOiAxMjAsCiAgICAgICAgICAiaGVpZ2h0IjogNjAKI
CAgICAgICB9CiAgICAgIH0sCiAgICAgICJ0eXBlIjogInBhcmFsbGVsIiwKICAgICAgIm5leHRfc3RlcHMiOiBbCiAgICAgICAgInN3aXR
jaC1jb25kaXRpb24tLWEzMDBjMzA3LTJmYjgtNDExZS1iMDE5LTFhNjVlYWFmMTFkMCIsCiAgICAgICAgImFjdGlvbi0tMTc0Mzg1MzctY
TA4YS00NWIwLWFmNzAtMmJlYzU4MWIzOWNlIgogICAgICBdCiAgICB9LAogICAgImFjdGlvbi0tMTc0Mzg1MzctYTA4YS00NWIwLWFmNzA
tMmJlYzU4MWIzOWNlIjogewogICAgICAibmFtZSI6ICJDcmVhdGUvQW1lbmQgY29ycmVsYXRpb24gY2FzZSIsCiAgICAgICJzdGVwX2V4d
GVuc2lvbnMiOiB7CiAgICAgICAgImV4dGVuc2lvbi1kZWZpbml0aW9uLS00MThlZTI0Yy05Y2IxLTQ2ZDktYWZhNS0zMDllMDFhYWJjN2Y
iOiB7CiAgICAgICAgICAidHlwZSI6ICJjb29yZGluYXRlcyIsCiAgICAgICAgICAieCI6IDM0NSwKICAgICAgICAgICJ5IjogLTUyMCwKI
CAgICAgICAgICJ3aWR0aCI6IDE1MCwKICAgICAgICAgICJoZWlnaHQiOiA2MAogICAgICAgIH0KICAgICAgfSwKICAgICAgInR5cGUiOiA
iYWN0aW9uIiwKICAgICAgImNvbW1hbmRzIjogWwogICAgICAgIHsKICAgICAgICAgICJ0eXBlIjogIm1hbnVhbCIKICAgICAgICB9CiAgI
CAgIF0sCiAgICAgICJhZ2VudCI6ICJzZWN1cml0eS1jYXRlZ29yeS0tMDU5ZGYyYmMtYTA5My00ZDc0LTlmMGYtNDE3YmJkMmJlNmVjIgo
gICAgfSwKICAgICJhY3Rpb24tLWU3YWI2YjM4LWQ4ZTUtNDdhZi05YTU0LTRlNmZlN2U1NmRjNyI6IHsKICAgICAgIm5hbWUiOiAiV2Fpd
CBmb3IgYWxsIGNoZWNrcyB0byBiZSBleGVjdXRlZCBpbiB0aGUgY2FzZSIsCiAgICAgICJvbl9jb21wbGV0aW9uIjogImFjdGlvbi0tNTB
jYzNjYjgtZDY0Zi00ZmYxLWJmMmYtMTQ4MGU4YWM1MmZjIiwKICAgICAgInN0ZXBfZXh0ZW5zaW9ucyI6IHsKICAgICAgICAiZXh0ZW5za
W9uLWRlZmluaXRpb24tLTQxOGVlMjRjLTljYjEtNDZkOS1hZmE1LTMwOWUwMWFhYmM3ZiI6IHsKICAgICAgICAgICJ0eXBlIjogImNvb3J
kaW5hdGVzIiwKICAgICAgICAgICJ4IjogNSwKICAgICAgICAgICJ5IjogNjAwLAogICAgICAgICAgIndpZHRoIjogMTUwLAogICAgICAgI
CAgImhlaWdodCI6IDYwCiAgICAgICAgfQogICAgICB9LAogICAgICAidHlwZSI6ICJhY3Rpb24iLAogICAgICAiY29tbWFuZHMiOiBbCiA
gICAgICAgewogICAgICAgICAgInR5cGUiOiAibWFudWFsIgogICAgICAgIH0KICAgICAgXSwKICAgICAgImFnZW50IjogInNlY3VyaXR5L
WNhdGVnb3J5LS0wNTlkZjJiYy1hMDkzLTRkNzQtOWYwZi00MTdiYmQyYmU2ZWMiCiAgICB9LAogICAgImFjdGlvbi0tZWI0NTEzNjUtNDY
2Ni00M2M2LTkyNjQtZDVkODQ3ZGIwNjlkIjogewogICAgICAibmFtZSI6ICJDb2xsZWN0IGFsZXJ0IGZpZWxkcyBmb3IgXCJjb21wdXRlc
iBnZW5lcmF0ZXMgcGFzc3dvcmQgaGFzaGVzXCIiLAogICAgICAib25fY29tcGxldGlvbiI6ICJpZi1jb25kaXRpb24tLTIxYzZmNDQ5LTA
4OTQtNGEzZi1hYzYwLTllNWNlOTgwNzY5NCIsCiAgICAgICJzdGVwX2V4dGVuc2lvbnMiOiB7CiAgICAgICAgImV4dGVuc2lvbi1kZWZpb
ml0aW9uLS00MThlZTI0Yy05Y2IxLTQ2ZDktYWZhNS0zMDllMDFhYWJjN2YiOiB7CiAgICAgICAgICAidHlwZSI6ICJjb29yZGluYXRlcyI
sCiAgICAgICAgICAieCI6IC04NSwKICAgICAgICAgICJ5IjogLTM1MCwKICAgICAgICAgICJ3aWR0aCI6IDE1MCwKICAgICAgICAgICJoZ
WlnaHQiOiA2MAogICAgICAgIH0KICAgICAgfSwKICAgICAgInR5cGUiOiAiYWN0aW9uIiwKICAgICAgImNvbW1hbmRzIjogWwogICAgICA
gIHsKICAgICAgICAgICJ0eXBlIjogIm1hbnVhbCIKICAgICAgICB9CiAgICAgIF0sCiAgICAgICJhZ2VudCI6ICJzZWN1cml0eS1jYXRlZ
29yeS0tMDU5ZGYyYmMtYTA5My00ZDc0LTlmMGYtNDE3YmJkMmJlNmVjIiwKICAgICAgIm91dF9hcmdzIjogWwogICAgICAgICJfX3BhcmV
udF9wcm9jZXNzX3NlZW5fb25fc2FtZV9ob3N0X18iCiAgICAgIF0KICAgIH0sCiAgICAiaWYtY29uZGl0aW9uLS0yMWM2ZjQ0OS0wODk0L
TRhM2YtYWM2MC05ZTVjZTk4MDc2OTQiOiB7CiAgICAgICJuYW1lIjogIlBhcmVudCBwcm9jZXNzIGFscmVhZHkgc2VlbiBvbiBzYW1lIGh
vc3Q/IiwKICAgICAgInN0ZXBfZXh0ZW5zaW9ucyI6IHsKICAgICAgICAiZXh0ZW5zaW9uLWRlZmluaXRpb24tLTQxOGVlMjRjLTljYjEtN
DZkOS1hZmE1LTMwOWUwMWFhYmM3ZiI6IHsKICAgICAgICAgICJ0eXBlIjogImNvb3JkaW5hdGVzIiwKICAgICAgICAgICJ4IjogMzgwLAo
gICAgICAgICAgInkiOiAyMjAsCiAgICAgICAgICAid2lkdGgiOiAxMjAsCiAgICAgICAgICAiaGVpZ2h0IjogNjAKICAgICAgICB9CiAgI
CAgIH0sCiAgICAgICJ0eXBlIjogImlmLWNvbmRpdGlvbiIsCiAgICAgICJjb25kaXRpb24iOiAiX19wYXJlbnRfcHJvY2Vzc19zZWVuX29
uX3NhbWVfaG9zdF9fOnZhbHVlID09IHRydWUiLAogICAgICAib25fdHJ1ZSI6ICJhY3Rpb24tLTVmYWE0NjE3LTI3ZDgtNDM4Yy05MjhhL
TkwZGYwZTA0YTdmNyIsCiAgICAgICJvbl9mYWxzZSI6ICJlbmQtLTQ0MjQ2MmYyLTQ3YjEtNDVmYi1iM2U0LTkzMTY4YmJkNzAxNiIKICA
gIH0sCiAgICAiZW5kLS00NDI0NjJmMi00N2IxLTQ1ZmItYjNlNC05MzE2OGJiZDcwMTYiOiB7CiAgICAgICJzdGVwX2V4dGVuc2lvbnMiO
iB7CiAgICAgICAgImV4dGVuc2lvbi1kZWZpbml0aW9uLS00MThlZTI0Yy05Y2IxLTQ2ZDktYWZhNS0zMDllMDFhYWJjN2YiOiB7CiAgICA
gICAgICAidHlwZSI6ICJjb29yZGluYXRlcyIsCiAgICAgICAgICAieCI6IDI1MCwKICAgICAgICAgICJ5IjogMjMwLAogICAgICAgICAgI
ndpZHRoIjogNjAsCiAgICAgICAgICAiaGVpZ2h0IjogNDAKICAgICAgICB9CiAgICAgIH0sCiAgICAgICJ0eXBlIjogImVuZCIKICAgIH0
sCiAgICAiYWN0aW9uLS01ZmFhNDYxNy0yN2Q4LTQzOGMtOTI4YS05MGRmMGUwNGE3ZjciOiB7CiAgICAgICJuYW1lIjogIlBvdGVudGlhb
CBQb3N0IEV4cGxvaXRhdGlvbiBhY3Rpdml0eSAoYWRkIDEgcG9pbnQpIiwKICAgICAgIm9uX2NvbXBsZXRpb24iOiAiYWN0aW9uLS1lN2F
iNmIzOC1kOGU1LTQ3YWYtOWE1NC00ZTZmZTdlNTZkYzciLAogICAgICAic3RlcF9leHRlbnNpb25zIjogewogICAgICAgICJleHRlbnNpb
24tZGVmaW5pdGlvbi0tNDE4ZWUyNGMtOWNiMS00NmQ5LWFmYTUtMzA5ZTAxYWFiYzdmIjogewogICAgICAgICAgInR5cGUiOiAiY29vcmR
pbmF0ZXMiLAogICAgICAgICAgIngiOiA1LAogICAgICAgICAgInkiOiAzOTAsCiAgICAgICAgICAid2lkdGgiOiAxNTAsCiAgICAgICAgI
CAiaGVpZ2h0IjogNjAKICAgICAgICB9CiAgICAgIH0sCiAgICAgICJ0eXBlIjogImFjdGlvbiIsCiAgICAgICJjb21tYW5kcyI6IFsKICA
gICAgICB7CiAgICAgICAgICAidHlwZSI6ICJtYW51YWwiCiAgICAgICAgfQogICAgICBdLAogICAgICAiYWdlbnQiOiAic2VjdXJpdHktY
2F0ZWdvcnktLTA1OWRmMmJjLWEwOTMtNGQ3NC05ZjBmLTQxN2JiZDJiZTZlYyIKICAgIH0sCiAgICAiYWN0aW9uLS01MGNjM2NiOC1kNjR
mLTRmZjEtYmYyZi0xNDgwZThhYzUyZmMiOiB7CiAgICAgICJuYW1lIjogIlRhbGx5IHBvaW50cyIsCiAgICAgICJvbl9jb21wbGV0aW9uI
```

```
jogImlmLWNvbmRpdGlvbi0tYjJiNGE1MDAtZWNjMC00NGUwLTg5NDktNTIzYTc3ZmY4MmFjIiwKICAgICAgInN0ZXBfZXh0ZW5zaW9ucyI
6IHsKICAgICAgICAiZXh0ZW5zaW9uLWRlZmluaXRpb24tLTQxOGVlMjRjLTljYjEtNDZkOS1hZmE1LTMwOWUwMWFhYmM3ZiI6IHsKICAgI
CAgICAgICJ0eXBlIjogImNvb3JkaW5hdGVzIiwKICAgICAgICAgICJ4IjogNSwKICAgICAgICAgICJ5IjogNzIwLAogICAgICAgICAgInd
pZHRoIjogMTUwLAogICAgICAgICAgImhlaWdodCI6IDYwCiAgICAgICAgfQogICAgICB9LAogICAgICAidHlwZSI6ICJhY3Rpb24iLAogI
CAgICAiY29tbWFuZHMiOiBbCiAgICAgICAgewogICAgICAgICAgInR5cGUiOiAibWFudWFsIgogICAgICAgIH0KICAgICAgXSwKICAgICA
gImFnZW50IjogInNlY3VyaXR5LWNhdGVnb3J5LS0wNTlkZjJiYy1hMDkzLTRkNzQtOWYwZi00MTdiYmQyYmU2ZWMiLAogICAgICAib3V0X
2FyZ3MiOiBbCiAgICAgICAgIl9fcG9pbnRzX18iCiAgICAgIF0KICAgIH0sCiAgICAiaWYtY29uZGl0aW9uLS1iMmI0YTUwMC1lY2MwLTQ
0ZTAtODk0OS01MjNhNzdmZjgyYWMiOiB7CiAgICAgICJuYW1lIjogIk1vcmUgdGhhbiAxIHBvaW50PyIsCiAgICAgICJzdGVwX2V4dGVuc
2lvbnMiOiB7CiAgICAgICAgImV4dGVuc2lvbi1kZWZpbml0aW9uLS00MThlZTI0Yy05Y2IxLTQ2ZDktYWZhNS0zMDllMDFhYWJjN2YiOiB
7CiAgICAgICAgICAidHlwZSI6ICJjb29yZGluYXRlcyIsCiAgICAgICAgICAieCI6IDIwLAogICAgICAgICAgInkiOiA4NTAsCiAgICAgI
CAgICAid2lkdGgiOiAxMjAsCiAgICAgICAgICAiaGVpZ2h0IjogNjAKICAgICAgICB9CiAgICAgIH0sCiAgICAgICJ0eXBlIjogImlmLWN
vbmRpdGlvbiIsCiAgICAgICJjb25kaXRpb24iOiAiX19wb2ludHNfXzp2YWx1ZSA+PSAxIiwKICAgICAgIm9uX3RydWUiOiAiaWYtY29uZ
Gl0aW9uLS1mNjhjOWJkOC1jYzY4LTQ4ZjAtYjg2YS1iZjU3ZGZkZTJhMTkiLAogICAgICAib25fZmFsc2UiOiAiZW5kLS0yNjYyYWVlZC0
wMTE1LTQzZTMtODI5Ny1mNzg3OGM5Zjk4NjciCiAgICB9LAogICAgImVuZC0tMjY2MmFlZWQtMDExNS00M2UzLTgyOTctZjc4NzhjOWY5O
DY3IjogewogICAgICAic3RlcF9leHRlbnNpb25zIjogewogICAgICAgICJleHRlbnNpb24tZGVmaW5pdGlvbi0tNDE4ZWUyNGMtOWNiMS0
0NmQ5LWFmYTUtMzA5ZTAxYWFiYzdmIjogewogICAgICAgICAgInR5cGUiOiAiY29vcmRpbmF0ZXMiLAogICAgICAgICAgIngiOiAtMTEwL
AogICAgICAgICAgInkiOiA4NjAsCiAgICAgICAgICAid2lkdGgiOiA2MCwKICAgICAgICAgICJoZWlnaHQiOiA0MAogICAgICAgIH0KICA
gICAgfSwKICAgICAgInR5cGUiOiAiZW5kIgogICAgfSwKICAgICJpZi1jb25kaXRpb24tLWY2OGM5YmQ4LWNjNjgtNDhmMC1iODZhLWJmN
TdkZmRlMmExOSI6IHsKICAgICAgIm5hbWUiOiAiTW9yZSB0aGFuIDMgcG9pbnRzPyIsCiAgICAgICJzdGVwX2V4dGVuc2lvbnMiOiB7CiA
gICAgICAgImV4dGVuc2lvbi1kZWZpbml0aW9uLS00MThlZTI0Yy05Y2IxLTQ2ZDktYWZhNS0zMDllMDFhYWJjN2YiOiB7CiAgICAgICAgI
CAidHlwZSI6ICJjb29yZGluYXRlcyIsCiAgICAgICAgICAieCI6IDIwLAogICAgICAgICAgInkiOiA5NzAsCiAgICAgICAgICAid2lkdGg
iOiAxMjAsCiAgICAgICAgICAiaGVpZ2h0IjogNjAKICAgICAgICB9CiAgICAgIH0sCiAgICAgICJ0eXBlIjogImlmLWNvbmRpdGlvbiIsC
iAgICAgICJjb25kaXRpb24iOiAiX19wb2ludHNfXzp2YWx1ZSA+PSAzIiwKICAgICAgIm9uX3RydWUiOiAiYWN0aW9uLS1lYWFmYjg1MS1
kYjg1LTQ1NjItOGZhYy01YTA3ZTNiNjI0MzUiLAogICAgICAib25fZmFsc2UiOiAiYWN0aW9uLS0yNmY2ODI5Yi1kZjJiLTQwNmYtYTJhM
S0xYjczYjZiMzliNTYiCiAgICB9LAogICAgImFjdGlvbi0tMjZmNjgyOWItZGYyYi00MDZmLWEyYTEtMWI3M2I2YjM5YjU2IjogewogICA
gICAibmFtZSI6ICJDcmVhdGUgTG93IFByaW9yaXR5IGNhc2UiLAogICAgICAib25fY29tcGxldGlvbiI6ICJhY3Rpb24tLWZjODAwNTExL
WJjYTItNGJmYS04MjcxLWQzNDM3YmRiMTdmYiIsCiAgICAgICJzdGVwX2V4dGVuc2lvbnMiOiB7CiAgICAgICAgImV4dGVuc2lvbi1kZWZ
pbml0aW9uLS00MThlZTI0Yy05Y2IxLTQ2ZDktYWZhNS0zMDllMDFhYWJjN2YiOiB7CiAgICAgICAgICAidHlwZSI6ICJjb29yZGluYXRlc
yIsCiAgICAgICAgICAieCI6IC0yNDUsCiAgICAgICAgICAieSI6IDEwODAsCiAgICAgICAgICAid2lkdGgiOiAxNTAsCiAgICAgICAgICA
iaGVpZ2h0IjogNjAKICAgICAgICB9CiAgICAgIH0sCiAgICAgICJ0eXBlIjogImFjdGlvbiIsCiAgICAgICJjb21tYW5kcyI6IFsKICAgI
CAgICB7CiAgICAgICAgICAidHlwZSI6ICJtYW51YWwiCiAgICAgICAgfQogICAgICBdLAogICAgICAiYWdlbnQiOiAic2VjdXJpdHktY2F
0ZWdvcnktLTA1OWRmMmJjLWEwOTMtNGQ3NC05ZjBmLTQxN2JiZDJiZTZlYyIKICAgIH0sCiAgICAiYWN0aW9uLS1lYWFmYjg1MS1kYjg1L
TQ1NjItOGZhYy01YTA3ZTNiNjI0MzUiOiB7CiAgICAgICJuYW1lIjogIkNyZWF0ZSBIaWdoIFByaW9yaXR5IGNhc2UiLAogICAgICAib25
fY29tcGxldGlvbiI6ICJhY3Rpb24tLWZjODAwNTExLWJjYTItNGJmYS04MjcxLWQzNDM3YmRiMTdmYiIsCiAgICAgICJzdGVwX2V4dGVuc
2lvbnMiOiB7CiAgICAgICAgImV4dGVuc2lvbi1kZWZpbml0aW9uLS00MThlZTI0Yy05Y2IxLTQ2ZDktYWZhNS0zMDllMDFhYWJjN2YiOiB
7CiAgICAgICAgICAidHlwZSI6ICJjb29yZGluYXRlcyIsCiAgICAgICAgICAieCI6IDUsCiAgICAgICAgICAieSI6IDEwODAsCiAgICAgI
CAgICAid2lkdGgiOiAxNTAsCiAgICAgICAgICAiaGVpZ2h0IjogNjAKICAgICAgICB9CiAgICAgIH0sCiAgICAgICJ0eXBlIjogImFjdGl
vbiIsCiAgICAgICJjb21tYW5kcyI6IFsKICAgICAgICB7CiAgICAgICAgICAidHlwZSI6ICJtYW51YWwiCiAgICAgICAgfQogICAgICBdL
AogICAgICAiYWdlbnQiOiAic2VjdXJpdHktY2F0ZWdvcnktLTA1OWRmMmJjLWEwOTMtNGQ3NC05ZjBmLTQxN2JiZDJiZTZlYyIKICAgIH0
sCiAgICAiYWN0aW9uLS1mYzgwMDUxMS1iY2EyLTRiZmEtODI3MS1kMzQzN2JkYjE3ZmIiOiB7CiAgICAgICJuYW1lIjogIk5vdGlmeSBzZ
WN1cml0eSBvcGVyYXRvciIsCiAgICAgICJvbl9jb21wbGV0aW9uIjogImVuZC0tNzRhYWRjMmItM2JlYy00M2IzLTg2M2EtNmFlNTU3MGY
zNTY3IiwKICAgICAgInN0ZXBfZXh0ZW5zaW9ucyI6IHsKICAgICAgICAiZXh0ZW5zaW9uLWRlZmluaXRpb24tLTQxOGVlMjRjLTljYjEtN
DZkOS1hZmE1LTMwOWUwMWFhYmM3ZiI6IHsKICAgICAgICAgICJ0eXBlIjogImNvb3JkaW5hdGVzIiwKICAgICAgICAgICJ4IjogNSwKICA
gICAgICAgICJ5IjogMTIwMCwKICAgICAgICAgICJ3aWR0aCI6IDE1MCwKICAgICAgICAgICJoZWlnaHQiOiA2MAogICAgICAgIH0KICAgI
CAgfSwKICAgICAgInR5cGUiOiAiYWN0aW9uIiwKICAgICAgImNvbW1hbmRzIjogWwogICAgICAgIHsKICAgICAgICAgICJ0eXBlIjogIm1
hbnVhbCIKICAgICAgICB9CiAgICAgIF0sCiAgICAgICJhZ2VudCI6ICJzZWN1cml0eS1jYXRlZ29yeS0tMDU5ZGYyYmMtYTA5My00ZDc0L
TlmMGYtNDE3YmJkMmJlNmVjIgogICAgfSwKICAgICJlbmQtLTc0YWFkYzJiLTNiZWMtNDNiMy04NjNhLTZhZTU1NzBmMzU2NyI6IHsKICA
gICAgInN0ZXBfZXh0ZW5zaW9ucyI6IHsKICAgICAgICAiZXh0ZW5zaW9uLWRlZmluaXRpb24tLTQxOGVlMjRjLTljYjEtNDZkOS1hZmE1L
TMwOWUwMWFhYmM3ZiI6IHsKICAgICAgICAgICJ0eXBlIjogImNvb3JkaW5hdGVzIiwKICAgICAgICAgICJ4IjogNTAsCiAgICAgICAgICA
ieSI6IDEzMjAsCiAgICAgICAgICAid2lkdGgiOiA2MCwKICAgICAgICAgICJoZWlnaHQiOiA0MAogICAgICAgIH0KICAgICAgfSwKICAgI
CAgInR5cGUiOiAiZW5kIgogICAgfSwKICAgICJhY3Rpb24tLWZlYjQ3MmQ5LTBmZjctNDEzZi04YWUwLTYyYmM4NGVhNGUxMiI6IHsKICA
gICAgIm5hbWUiOiAiQ29sbGVjdCBhbGVydCBmaWVsZHMgZm9yIFwiY29tcHV0ZXIgdXNlcyBQb3dlcnNoZWxsIHRvIGVudW1lcmF0ZSBuZ
XR3b3JrXCIiLAogICAgICAib25fY29tcGxldGlvbiI6ICJpZi1jb25kaXRpb24tLTIxYzZmNDQ5LTA4OTQtNGEzZi1hYzYwLTllNWNlOTg
wNzY5NCIsCiAgICAgICJzdGVwX2V4dGVuc2lvbnMiOiB7CiAgICAgICAgImV4dGVuc2lvbi1kZWZpbml0aW9uLS00MThlZTI0Yy05Y2IxL
TQ2ZDktYWZhNS0zMDllMDFhYWJjN2YiOiB7CiAgICAgICAgICAidHlwZSI6ICJjb29yZGluYXRlcyIsCiAgICAgICAgICAieCI6IDM2NSw
KICAgICAgICAgICJ5IjogLTMzMCwKICAgICAgICAgICJ3aWR0aCI6IDE1MCwKICAgICAgICAgICJoZWlnaHQiOiA2MAogICAgICAgIH0KI
CAgICAgfSwKICAgICAgInR5cGUiOiAiYWN0aW9uIiwKICAgICAgImNvbW1hbmRzIjogWwogICAgICAgIHsKICAgICAgICAgICJ0eXBlIjo
gIm1hbnVhbCIKICAgICAgICB9CiAgICAgIF0sCiAgICAgICJhZ2VudCI6ICJzZWN1cml0eS1jYXRlZ29yeS0tMDU5ZGYyYmMtYTA5My00Z
Dc0LTlmMGYtNDE3YmJkMmJlNmVjIiwKICAgICAgIm91dF9hcmdzIjogWwogICAgICAgICJfX3BhcmVudF9wcm9jZXNzX3NlZW5fb25fc2F
tZV9ob3N0X18iCiAgICAgIF0KICAgIH0sCiAgICAiYWN0aW9uLS03YTIzYzdlMy04ZDI0LTRhYjctYjRlYy0xZTY4MzUwYjhlZGYiOiB7C
iAgICAgICJuYW1lIjogIkNvbGxlY3QgYWxlcnQgZmllbGRzIGZvciBcIndpbnJzIHJ1bm5pbmcgY29tbWFuZHNcIiIsCiAgICAgICJvbl9
jb21wbGV0aW9uIjogImlmLWNvbmRpdGlvbi0tYjM2ZGZiMmItYjQ4Zi00YWFmLThiZjAtMzliMGY0NzVmNjIzIiwKICAgICAgInN0ZXBfZ
Xh0ZW5zaW9ucyI6IHsKICAgICAgICAiZXh0ZW5zaW9uLWRlZmluaXRpb24tLTQxOGVlMjRjLTljYjEtNDZkOS1hZmE1LTMwOWUwMWFhYmM
3ZiI6IHsKICAgICAgICAgICJ0eXBlIjogImNvb3JkaW5hdGVzIiwKICAgICAgICAgICJ4IjogNjg1LAogICAgICAgICAgInkiOiAtMjYwL
AogICAgICAgICAgIndpZHRoIjogMTUwLAogICAgICAgICAgImhlaWdodCI6IDYwCiAgICAgICAgfQogICAgICB9LAogICAgICAidHlwZSI
6ICJhY3Rpb24iLAogICAgICAiY29tbWFuZHMiOiBbCiAgICAgICAgewogICAgICAgICAgInR5cGUiOiAibWFudWFsIgogICAgICAgIH0KI
CAgICAgXSwKICAgICAgImFnZW50IjogInNlY3VyaXR5LWNhdGVnb3J5LS0wNTlkZjJiYy1hMDkzLTRkNzQtOWYwZi00MTdiYmQyYmU2ZWM
iLAogICAgICAib3V0X2FyZ3MiOiBbCiAgICAgICAgIl9fdXNlcl9vcl9ob3N0X3NhbWVfYXNfcG93ZXJzaGVsbF9lbnVtZXJhdGlvbl9fI
```

```
gogICAgICBdCiAgICB9LAogICAgImlmLWNvbmRpdGlvbi0tYjM2ZGZiMmItYjQ4Zi00YWFmLThiZjAtMzliMGY0NzVmNjIzIjogewogICA
gICAibmFtZSI6ICJVc2VyIGFjY291bnQgb3IgaG9zdCB0aGUgc2FtZSBhcyBQb3dlcnNoZWxsIGVudW1lcmF0aW9uPyIsCiAgICAgICJzd
GVwX2V4dGVuc2lvbnMiOiB7CiAgICAgICAgImV4dGVuc2lvbi1kZWZpbml0aW9uLS00MThlZTI0Yy05Y2IxLTQ2ZDktYWZhNS0zMDllMDF
hYWJjN2YiOiB7CiAgICAgICAgICAidHlwZSI6ICJjb29yZGluYXRlcyIsCiAgICAgICAgICAieCI6IDcwMCwKICAgICAgICAgICJ5IjogM
jIwLAogICAgICAgICAgIndpZHRoIjogMTIwLAogICAgICAgICAgImhlaWdodCI6IDYwCiAgICAgICAgfQogICAgICB9LAogICAgICAidHl
wZSI6ICJpZi1jb25kaXRpb24iLAogICAgICAiY29uZGl0aW9uIjogIl9fdXNlcl9vcl9ob3N0X3NhbWVfYXNfcG93ZXJzaGVsbF9lbnVtZ
XJhdGlvbl9fOnZhbHVlID09IHRydWUiLAogICAgICAib25fdHJ1ZSI6ICJhY3Rpb24tLWI1MWY2ZDEzLTUzMTctNGM3MS05MDQwLTI2ZWY
2NTliMjBkMSIsCiAgICAgICJvbl9mYWxzZSI6ICJlbmQtLTM1NzljMjQ5LTBkYTMtNGM0Yi05NDU2LTRhN2MzOWMwYzI5MiIKICAgIH0sC
iAgICAiZW5kLS0zNTc5YzI0OS0wZGEzLTRjNGItOTQ1Ni00YTdjMzljMGMyOTIiOiB7CiAgICAgICJzdGVwX2V4dGVuc2lvbnMiOiB7CiA
gICAgICAgImV4dGVuc2lvbi1kZWZpbml0aW9uLS00MThlZTI0Yy05Y2IxLTQ2ZDktYWZhNS0zMDllMDFhYWJjN2YiOiB7CiAgICAgICAgI
CAidHlwZSI6ICJjb29yZGluYXRlcyIsCiAgICAgICAgICAieCI6IDU4MCwKICAgICAgICAgICJ5IjogMjMwLAogICAgICAgICAgIndpZHR
oIjogNjAsCiAgICAgICAgICAiaGVpZ2h0IjogNDAKICAgICAgICB9CiAgICAgIH0sCiAgICAgICJ0eXBlIjogImVuZCIKICAgIH0sCiAgI
CAiYWN0aW9uLS1iNTFmNmQxMy01MzE3LTRjNzEtOTA0MC0yNmVmNjU5YjIwZDEiOiB7CiAgICAgICJuYW1lIjogIlBvdGVudGlhbCBMYXR
lcmFsIE1vdmVtZW50IGFjdGl2aXR5IChhZGQgMSBwb2ludCkiLAogICAgICAib25fY29tcGxldGlvbiI6ICJhY3Rpb24tLWU3YWI2YjM4L
WQ4ZTUtNDdhZi05YTU0LTRlNmZlN2U1NmRjNyIsCiAgICAgICJzdGVwX2V4dGVuc2lvbnMiOiB7CiAgICAgICAgImV4dGVuc2lvbi1kZWZ
pbml0aW9uLS00MThlZTI0Yy05Y2IxLTQ2ZDktYWZhNS0zMDllMDFhYWJjN2YiOiB7CiAgICAgICAgICAidHlwZSI6ICJjb29yZGluYXRlc
yIsCiAgICAgICAgICAieCI6IDY4NSwKICAgICAgICAgICJ5IjogNDUwLAogICAgICAgICAgIndpZHRoIjogMTUwLAogICAgICAgICAgImh
laWdodCI6IDYwCiAgICAgICAgfQogICAgICB9LAogICAgICAidHlwZSI6ICJhY3Rpb24iLAogICAgICAiY29tbWFuZHMiOiBbCiAgICAgI
CAgewogICAgICAgICAgInR5cGUiOiAibWFudWFsIgogICAgICAgIH0KICAgICAgXSwKICAgICAgImFnZW50IjogInNlY3VyaXR5LWNhdGV
nb3J5LS0wNTlkZjJiYy1hMDkzLTRkNzQtOWYwZi00MTdiYmQyYmU2ZWMiCiAgICB9LAogICAgImFjdGlvbi0tODVkNGY4MTQtODBhNi00Z
DNmLTk0NzMtOGU0NWJkMTQzZTA4IjogewogICAgICAibmFtZSI6ICJDb2xsZWN0IGFsZXJ0IGZpZWxkcyBmb3IgXCJOVERTIGZpbGUgY29
waWVkIG9uIGNvbXB1dGVyXCIiLAogICAgICAib25fY29tcGxldGlvbiI6ICJpZi1jb25kaXRpb24tLTNkZDIwYjc1LTRmMTQtNDk0OS05M
ThhLTE3M2JkMTI4NDMyZSIsCiAgICAgICJzdGVwX2V4dGVuc2lvbnMiOiB7CiAgICAgICAgImV4dGVuc2lvbi1kZWZpbml0aW9uLS00MTh
lZTI0Yy05Y2IxLTQ2ZDktYWZhNS0zMDllMDFhYWJjN2YiOiB7CiAgICAgICAgICAidHlwZSI6ICJjb29yZGluYXRlcyIsCiAgICAgICAgI
CAieCI6IDk1NSwKICAgICAgICAgICJ5IjogLTE3MCwKICAgICAgICAgICJ3aWR0aCI6IDE1MCwKICAgICAgICAgICJoZWlnaHQiOiA2MAo
gICAgICAgIH0KICAgICAgfSwKICAgICAgInR5cGUiOiAiYWN0aW9uIiwKICAgICAgImNvbW1hbmRzIjogWwogICAgICAgIHsKICAgICAgI
CAgICJ0eXBlIjogIm1hbnVhbCIKICAgICAgICB9CiAgICAgIF0sCiAgICAgICJhZ2VudCI6ICJzZWN1cml0eS1jYXRlZ29yeS0tMDU5ZGY
yYmMtYTA5My00ZDc0LTlmMGYtNDE3YmJkMmJlNmVjIiwKICAgICAgIm91dF9hcmdzIjogWwogICAgICAgICJfX2NvcHlfbm90X3BhcnRfb
2ZfYmFja3VwX18iCiAgICAgIF0KICAgIH0sCiAgICAiaWYtY29uZGl0aW9uLS0zZGQyMGI3NS00ZjE0LTQ5NDktOTE4YS0xNzNiZDEyODQ
zMmUiOiB7CiAgICAgICJuYW1lIjogIkNvcHkgbm90IHBhcnQgb2YgYSBiYWNrdXA/IiwKICAgICAgInN0ZXBfZXh0ZW5zaW9ucyI6IHsKI
CAgICAgICAiZXh0ZW5zaW9uLWRlZmluaXRpb24tLTQxOGVlMjRjLTljYjEtNDZkOS1hZmE1LTMwOWUwMWFhYmM3ZiI6IHsKICAgICAgICA
gICJ0eXBlIjogImNvb3JkaW5hdGVzIiwKICAgICAgICAgICJ4IjogOTcwLAogICAgICAgICAgInkiOiAyMjAsCiAgICAgICAgICAid2lkd
GgiOiAxMjAsCiAgICAgICAgICAiaGVpZ2h0IjogNjAKICAgICAgICB9CiAgICAgIH0sCiAgICAgICJ0eXBlIjogImlmLWNvbmRpdGlvbiI
sCiAgICAgICJjb25kaXRpb24iOiAiX19jb3B5X25vdF9wYXJ0X29mX2JhY2t1cF9fOnZhbHVlID09IHRydWUiLAogICAgICAib25fdHJ1Z
SI6ICJhY3Rpb24tLTg2OTYzNzc4LWEyZTEtNGZjOS1iNDE0LTE5ZTFiM2E1NTc5YyIsCiAgICAgICJvbl9mYWxzZSI6ICJlbmQtLWFhOWM
4ZWEyLTQyNDEtNGNmMS05MGI2LTBmOWZkNGZkYTllNiIKICAgIH0sCiAgICAiZW5kLS1hYTljOGVhMi00MjQxLTRjZjEtOTBiNi0wZjlmZ
DRmZGE5ZTYiOiB7CiAgICAgICJzdGVwX2V4dGVuc2lvbnMiOiB7CiAgICAgICAgImV4dGVuc2lvbi1kZWZpbml0aW9uLS00MThlZTI0Yy0
5Y2IxLTQ2ZDktYWZhNS0zMDllMDFhYWJjN2YiOiB7CiAgICAgICAgICAidHlwZSI6ICJjb29yZGluYXRlcyIsCiAgICAgICAgICAieCI6I
Dg2MCwKICAgICAgICAgICJ5IjogMjMwLAogICAgICAgICAgIndpZHRoIjogNjAsCiAgICAgICAgICAiaGVpZ2h0IjogNDAKICAgICAgICB
9CiAgICAgIH0sCiAgICAgICJ0eXBlIjogImVuZCIKICAgIH0sCiAgICAiYWN0aW9uLS04Njk2Mzc3OC1hMmUxLTRmYzktYjQxNC0xOWUxY
jNhNTU3OWMiOiB7CiAgICAgICJuYW1lIjogIlBvdGVudGlhbCBDcmVkZW50aWFsIFRoZWZ0IChhZGQgMiBwb2ludHMpIiwKICAgICAgIm9
uX2NvbXBsZXRpb24iOiAiYWN0aW9uLS1lN2FiNmIzOC1kOGU1LTQ3YWYtOWE1NC00ZTZmZTdlNTZkYzciLAogICAgICAic3RlcF9leHRlb
nNpb25zIjogewogICAgICAgICJleHRlbnNpb24tZGVmaW5pdGlvbi0tNDE4ZWUyNGMtOWNiMS00NmQ5LWFmYTUtMzA5ZTAxYWFiYzdmIjo
gewogICAgICAgICAgInR5cGUiOiAiY29vcmRpbmF0ZXMiLAogICAgICAgICAgIngiOiA5NTUsCiAgICAgICAgICAieSI6IDUwMCwKICAgI
CAgICAgICJ3aWR0aCI6IDE1MCwKICAgICAgICAgICJoZWlnaHQiOiA2MAogICAgICAgIH0KICAgICAgfSwKICAgICAgInR5cGUiOiAiYWN
0aW9uIiwKICAgICAgImNvbW1hbmRzIjogWwogICAgICAgIHsKICAgICAgICAgICJ0eXBlIjogIm1hbnVhbCIKICAgICAgICB9CiAgICAgI
F0sCiAgICAgICJhZ2VudCI6ICJzZWN1cml0eS1jYXRlZ29yeS0tMDU5ZGYyYmMtYTA5My00ZDc0LTlmMGYtNDE3YmJkMmJlNmVjIgogICA
gfSwKICAgICJhY3Rpb24tLTg2YmEyNDgxLTUxNTItNDAzYS1hYzAyLTg2NGRjM2FiMzU1ZiI6IHsKICAgICAgIm5hbWUiOiAiQ29sbGVjd
CBhbGVydCBmaWVsZHMgZm9yIFwibG9ncyBkZWxldGVkIG9uIGNvbXB1dGVyXCIiLAogICAgICAib25fY29tcGxldGlvbiI6ICJpZi1jb25
kaXRpb24tLWZkMWY0MWIxLTAxNmItNGExMC05MDUzLTRjN2FlNjY5OWIyMyIsCiAgICAgICJzdGVwX2V4dGVuc2lvbnMiOiB7CiAgICAgI
CAgIjAiOiBbCiAgICAgICAgICAiZXh0ZW5zaW9uLWRlZmluaXRpb24tLTQxOGVlMjRjLTljYjEtNDZkOS1hZmE1LTMwOWUwMWFhYmM3ZiI
KICAgICAgICBdLAogICAgICAgICJleHRlbnNpb24tZGVmaW5pdGlvbi0tNDE4ZWUyNGMtOWNiMS00NmQ5LWFmYTUtMzA5ZTAxYWFiYzdmI
jogewogICAgICAgICAgInR5cGUiOiAiY29vcmRpbmF0ZXMiLAogICAgICAgICAgIngiOiAxMjI1LAogICAgICAgICAgInkiOiAxMCwKICA
gICAgICAgICJ3aWR0aCI6IDE1MCwKICAgICAgICAgICJoZWlnaHQiOiA2MAogICAgICAgIH0KICAgICAgfSwKICAgICAgInR5cGUiOiAiY
WN0aW9uIiwKICAgICAgImNvbW1hbmRzIjogWwogICAgICAgIHsKICAgICAgICAgICJ0eXBlIjogIm1hbnVhbCIKICAgICAgICB9CiAgICA
gIF0sCiAgICAgICJhZ2VudCI6ICJzZWN1cml0eS1jYXRlZ29yeS0tMDU5ZGYyYmMtYTA5My00ZDc0LTlmMGYtNDE3YmJkMmJlNmVjIiwKI
CAgICAgIm91dF9hcmdzIjogWwogICAgICAgICJfX2xvZ3NfZGVsZXRlZF9vbl9jb21wdXRlcl9fIgogICAgICBdCiAgICB9LAogICAgIml
mLWNvbmRpdGlvbi0tZmQxZjQxYjEtMDE2Yi00YTEwLTkwNTMtNGM3YWU2Njk5YjIzIjogewogICAgICAibmFtZSI6ICJMb2dzIGRlbGV0Z
WQgb24gY29tcHV0ZXI/IiwKICAgICAgInN0ZXBfZXh0ZW5zaW9ucyI6IHsKICAgICAgICAiZXh0ZW5zaW9uLWRlZmluaXRpb24tLTQxOGV
lMjRjLTljYjEtNDZkOS1hZmE1LTMwOWUwMWFhYmM3ZiI6IHsKICAgICAgICAgICJ0eXBlIjogImNvb3JkaW5hdGVzIiwKICAgICAgICAgI
CJ4IjogMTI0MCwKICAgICAgICAgICJ5IjogMjIwLAogICAgICAgICAgIndpZHRoIjogMTIwLAogICAgICAgICAgImhlaWdodCI6IDYwCiA
gICAgICAgfQogICAgICB9LAogICAgICAidHlwZSI6ICJpZi1jb25kaXRpb24iLAogICAgICAiY29uZGl0aW9uIjogIl9fbG9nc19kZWxld
GVkX29uX2NvbXB1dGVyX186dmFsdWUgPT0gdHJ1ZSIsCiAgICAgICJvbl90cnVlIjogImFjdGlvbi0tNmRlMWNjODUtOTliZi00NjUwLTh
jMTktYmY5NTVmZTU0OThjIiwKICAgICAgIm9uX2ZhbHNlIjogImVuZC0tODQ2OWI2ODktNDU2OC00MjYxLTllYWYtNjQxNjUwNjExMDQ2I
gogICAgfSwKICAgICJlbmQtLTg0NjliNjg5LTQ1NjgtNDI2MS05ZWFmLTY0MTY1MDYxMTA0NiI6IHsKICAgICAgInN0ZXBfZXh0ZW5zaW9
ucyI6IHsKICAgICAgICAiZXh0ZW5zaW9uLWRlZmluaXRpb24tLTQxOGVlMjRjLTljYjEtNDZkOS1hZmE1LTMwOWUwMWFhYmM3ZiI6IHsKI
CAgICAgICAgICJ0eXBlIjogImNvb3JkaW5hdGVzIiwKICAgICAgICAgICJ4IjogMTQ0MCwKICAgICAgICAgICJ5IjogMjMwLAogICAgICA
gICAgIndpZHRoIjogNjAsCiAgICAgICAgICAiaGVpZ2h0IjogNDAKICAgICAgICB9CiAgICAgIH0sCiAgICAgICJ0eXBlIjogImVuZCIKI
```

```
CAgIH0sCiAgICAiYWN0aW9uLS02ZGUxY2M4NS05OWJmLTQ2NTAtOGMxOS1iZjk1NWZlNTQ5OGMiOiB7CiAgICAgICJuYW1lIjogIlBvdGV
udGlhbCBBdHRhY2sgQ2xlYW51cCAoYWRkIDIgcG9pbnRzKSIsCiAgICAgICJvbl9jb21wbGV0aW9uIjogImFjdGlvbi0tZTdhYjZiMzgtZ
DhlNS00N2FmLTlhNTQtNGU2ZmU3ZTU2ZGM3IiwKICAgICAgInN0ZXBfZXh0ZW5zaW9ucyI6IHsKICAgICAgICAiMCI6IFsKICAgICAgICA
gICJleHRlbnNpb24tZGVmaW5pdGlvbi0tNDE4ZWUyNGMtOWNiMS00NmQ5LWFmYTUtMzA5ZTAxYWFiYzdmIgogICAgICAgIF0sCiAgICAgI
CAgImV4dGVuc2lvbi1kZWZpbml0aW9uLS00MThlZTI0Yy05Y2IxLTQ2ZDktYWZhNS0zMDllMDFhYWJjN2YiOiB7CiAgICAgICAgICAidHl
wZSI6ICJjb29yZGluYXRlcyIsCiAgICAgICAgICAieCI6IDEyMjUsCiAgICAgICAgICAieSI6IDU3MCwKICAgICAgICAgICJ3aWR0aCI6I
DE1MCwKICAgICAgICAgICJoZWlnaHQiOiA2MAogICAgICAgIH0KICAgICAgfSwKICAgICAgInR5cGUiOiAiYWN0aW9uIiwKICAgICAgImN
vbW1hbmRzIjogWwogICAgICAgIHsKICAgICAgICAgICJ0eXBlIjogIm1hbnVhbCIKICAgICAgICB9CiAgICAgIF0sCiAgICAgICJhZ2Vud
CI6ICJzZWN1cml0eS1jYXRlZ29yeS0tMDU5ZGYyYmMtYTA5My00ZDc0LTlmMGYtNDE3YmJkMmJlNmVjIgogICAgfQogIH0sCiAgImFnZW5
0X2RlZmluaXRpb25zIjogewogICAgInNlY3VyaXR5LWNhdGVnb3J5LS0wNTlkZjJiYy1hMDkzLTRkNzQtOWYwZi00MTdiYmQyYmU2ZWMiO
iB7CiAgICAgICJ0eXBlIjogInNlY3VyaXR5LWNhdGVnb3J5IiwKICAgICAgIm5hbWUiOiAiU09BUiBQbGF0Zm9ybSIsCiAgICAgICJjYXR
lZ29yeSI6IFsKICAgICAgICAib3JjaGVzdHJhdG9yIgogICAgICBdCiAgICB9CiAgfSwKICAiZXh0ZW5zaW9uX2RlZmluaXRpb25zIjoge
wogICAgImV4dGVuc2lvbi1kZWZpbml0aW9uLS00MThlZTI0Yy05Y2IxLTQ2ZDktYWZhNS0zMDllMDFhYWJjN2YiOiB7CiAgICAgICJ0eXB
lIjogImV4dGVuc2lvbi1kZWZpbml0aW9uIiwKICAgICAgIm5hbWUiOiAiY29vcmRpbmF0ZXMgZXh0ZW5zaW9uIiwKICAgICAgImRlc2Nya
XB0aW9uIjogIkNvb3JkaW5hdGVzIGV4dGVuc2lvbiBmb3IgQ0FDQU8gY29uc3RydWN0cyBmb3IgdmlzdWFsaXphdGlvbiBwdXJwb3Nlcy4
iLAogICAgICAiY3JlYXRlZF9ieSI6ICJpZGVudGl0eS0tNWFiZTY5NWMtN2JkNS00YzMxLTg4MjQtMjUyODY5NmNkYmYxIiwKICAgICAgI
nNjaGVtYSI6ICJodHRwczovL3Jhdy5naXRodWJ1c2VyY29udGVudC5jb20vY3llbnRpZmljLXJuaS9jYWNhby1jb29yZGluYXRlcy1leHR
lbnNpb24vbWFpbi9zY2hlbWFzL2Nvb3JkaW5hdGVzLmpzb24iLAogICAgICAidmVyc2lvbiI6ICIxLjAuMCIKICAgIH0KICB9Cn0K",
      "extensions": {
        "extension-definition--809c4d84-7a6e-4039-97b4-da9fea03fcf9": {
          "extension_type": "new-sdo"
        }
      }
    },
    {
      "id": "x-oca-detection--4f808859-8559-4809-8bde-6f231e30560d",
      "type": "x-oca-detection",
      "spec_version": "2.1",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2025-03-06T13:52:57.117Z",
      "modified": "2025-03-06T13:52:57.118Z",
      "revoked": false,
      "confidence": 0,
      "lang": "en",
      "name": "Winrs running commands",
      "description": "This detection looks for winrshost.exe running commands with cmd.exe or powershell",
      "analytic": {
        "type": "Sigma Rule - base64 encoded YAML file",
        "rule":
"dGl0bGU6IFdpbnJzIHJ1bm5pbmcgY29tbWFuZHMKaWQ6IDIxNWJjMWVkLWNmNmItNGFmOC04ZmJlLTk3OWFlY2E5N2M2ZApzdGF0dXM6I
GV4cGVyaW1lbnRhbApkZXNjcmlwdGlvbjogVGhpcyBkZXRlY3Rpb24gbG9va3MgZm9yIHdpbnJzaG9zdC5leGUgcnVubmluZyBjb21tYW5
kcyB3aXRoIGNtZC5leGUgb3IgcG93ZXJzaGVsbApyZWZlcmVuY2VzOiBodHRwczovL2F0dGFjay5taXRyZS5vcmcvdGVjaG5pcXVlcy9UM
TAyMS8wMDYvCmF1dGhvcjogSkhVQVBMCmRhdGU6IDIwMjUvMDMvMDYKbW9kaWZpZWQ6IDIwMjUvMDMvMDYKdGFnczoKICAgIC0gYXR0YWN
rLnQxMDIxLjAwNgogICAgLSBhdHRhY2suZXhlY3V0aW9uCmxvZ3NvdXJjZToKICAgIGNhdGVnb3J5OiBwcm9jZXNzCiAgICBwcm9kdWN0O
iB3aW5kb3dzCmRldGVjdGlvbjoKICAgIHNlbGVjdGlvbl8xOgogICAgICAgIEV2ZW50Q29kZTogNDY4OAogICAgc2VsZWN0aW9uXzI6CiA
gICAgICAgcGFyZW50X3Byb2Nlc3NfbmFtZTogIndpbnJzaG9zdC5leGUiCiAgICBzZWxlY3Rpb25fMzoKICAgICAgICBwcm9jZXNzX25hb
WU6CiAgICAgICAgICAgIC0gImNtZC5leGUiCiAgICAgICAgICAgIC0gIipwb3dlcnNoZWxsKiIKICAgIGNvbmRpdGlvbjogc2VsZWN0aW9
uXzEgYW5kIHNlbGVjdGlvbl8yIGFuZCBzZWxlY3Rpb25fMwpmYWxzZXBvc2l0aXZlczoKICAgIC0gbGVnaXRpbWF0ZSBhZG1pbmlzdHJhd
G9yIGFjdGl2aXR5CmxldmVsOiBoaWdoCg=="
      },
      "extensions": {
        "extension-definition--c4690e13-107e-4796-8158-0dcf1ae7bc89": {
          "extension_type": "new-sdo"
        }
      }
    },
    {
      "type": "extension-definition",
      "spec_version": "2.1",
      "id": "extension-definition--bbc1d5c8-7ddc-4e89-be9c-f33ad02d71dd",
      "created_by_ref": "identity--b085a68a-bf48-4316-9667-37af78cba894",
      "created": "2022-03-31T13:00:00.000Z",
      "modified": "2025-06-18T12:00:00.000Z",
      "name": "x-oca-coa-playbook-ext Extension Definition",
      "description": "A property extension for the Course of Action SDO for sharing automated courses of
action (i.e., orchestration workflows or playbooks).",
      "schema": "https://raw.githubusercontent.com/opencybersecurityalliance/stix-
extensions/main/2.x/schemas/x-oca-coa-playbook-ext.json",
      "version": "4.0.0",
      "extension_types": [
        "property-extension"
      ]
    },
    {
      "id": "relationship--49a9b7f0-409b-4192-80df-9cb3225bb7f3",
      "source_ref": "x-oca-behavior--aefb3377-95bd-4cf9-984a-f804f809409a",
      "target_ref": "x-oca-behavior--8858a2bd-5729-4ef1-9932-3e3cc7feff99",
      "relationship_type": "occurs-before",
      "type": "relationship",
      "spec_version": "2.1",
      "created": "2024-11-22T09:51:05.809Z",
      "modified": "2024-11-22T09:51:05.809Z"
    },
    {
      "id": "relationship--100100f0-0d50-4657-bb19-06632ff59d15",
      "source_ref": "x-oca-behavior--aefb3377-95bd-4cf9-984a-f804f809409a",
      "target_ref": "attack-pattern--65f2d882-3f41-4d48-8a06-29af77ec9f90",
      "relationship_type": "uses",
      "type": "relationship",
      "spec_version": "2.1",
      "created": "2024-11-22T09:53:20.299Z",
      "modified": "2024-11-22T09:53:20.299Z"
    },
    {
      "id": "relationship--59012eb2-7e7d-4154-afa0-173b32bfeb1a",
      "source_ref": "x-oca-behavior--8858a2bd-5729-4ef1-9932-3e3cc7feff99",
      "target_ref": "attack-pattern--970a3432-3237-47ad-bcca-7d8cbb217736",
      "relationship_type": "uses",
      "type": "relationship",
      "spec_version": "2.1",
      "created": "2024-11-22T09:53:29.202Z",
      "modified": "2024-11-22T09:53:29.202Z"
    },
    {
      "id": "relationship--671d5d41-e094-4be9-ac67-15b7eaac2578",
      "source_ref": "x-oca-behavior--b63470f0-0bc7-467e-be25-08f5fbfc0415",
      "target_ref": "attack-pattern--3fc9b85a-2862-4363-a64d-d692e3ffbee0",
      "relationship_type": "uses",
      "type": "relationship",
      "spec_version": "2.1",
      "created": "2024-11-22T09:54:41.288Z",
      "modified": "2024-11-22T09:54:41.288Z"
    },
    {
      "id": "relationship--0a83195d-b41d-4010-a259-5995932e956e",
      "source_ref": "x-oca-behavior--b4eb6b07-787a-49d3-9677-fedef58d8342",
      "target_ref": "attack-pattern--6495ae23-3ab4-43c5-a94f-5638a2c31fd2",
      "relationship_type": "uses",
      "type": "relationship",
      "spec_version": "2.1",
      "created": "2024-11-22T09:55:06.153Z",
      "modified": "2024-11-22T09:55:06.153Z"
    },
    {
      "id": "relationship--04a07817-b2a2-467a-b6d6-f339433b84cc",
      "source_ref": "x-oca-detection--91111a24-7f6c-4ce2-9259-8c2aa1d88110",
      "target_ref": "x-oca-behavior--aefb3377-95bd-4cf9-984a-f804f809409a",
      "relationship_type": "detects",
      "type": "relationship",
      "spec_version": "2.1",
      "created": "2024-11-22T09:58:44.870Z",
      "modified": "2024-11-22T09:58:44.870Z"
    },
    {
      "id": "relationship--bba353c0-acbb-46fd-8980-cd0f5887f284",
      "source_ref": "x-oca-detection--21192a86-057c-4c58-a711-4cddbee31912",
    "target_ref": "x-oca-behavior--8858a2bd-5729-4ef1-9932-3e3cc7feff99",
    "relationship_type": "detects",
    "type": "relationship",
    "spec_version": "2.1",
    "created": "2024-11-22T09:58:56.387Z",
    "modified": "2024-11-22T09:58:56.387Z"
  },
  {
    "id": "relationship--70d4e866-14b0-47e0-9dc4-db19a628f9a6",
    "source_ref": "x-oca-detection--334886c6-cb58-4aba-b470-0ddc361ace33",
    "target_ref": "x-oca-behavior--b63470f0-0bc7-467e-be25-08f5fbfc0415",
    "relationship_type": "detects",
    "type": "relationship",
    "spec_version": "2.1",
    "created": "2024-11-22T09:59:26.322Z",
    "modified": "2024-11-22T09:59:26.323Z"
  },
  {
    "id": "relationship--d97006c0-ccfb-40fb-9dd5-2e220659066e",
    "source_ref": "x-oca-detection--9278b8ea-7c5e-47b7-acf3-bda6d7152f59",
    "target_ref": "x-oca-behavior--b4eb6b07-787a-49d3-9677-fedef58d8342",
    "relationship_type": "detects",
    "type": "relationship",
    "spec_version": "2.1",
    "created": "2024-11-22T09:59:53.807Z",
    "modified": "2024-11-22T09:59:53.807Z"
  },
  {
    "id": "relationship--edc13bac-666a-47e3-9f91-2dca054867bc",
    "source_ref": "x-oca-detection--9278b8ea-7c5e-47b7-acf3-bda6d7152f59",
    "target_ref": "x-oca-detector--f9ccdd3d-2217-45fd-8e65-055da8e66c3e",
    "relationship_type": "uses",
    "type": "relationship",
    "spec_version": "2.1",
    "created": "2025-02-12T15:54:44.873Z",
    "modified": "2025-02-12T15:54:44.873Z"
  },
  {
    "id": "relationship--13c47672-ebe5-453e-9827-d5dc124f4a79",
    "source_ref": "x-oca-detection--91111a24-7f6c-4ce2-9259-8c2aa1d88110",
    "target_ref": "x-oca-detector--f9ccdd3d-2217-45fd-8e65-055da8e66c3e",
    "relationship_type": "uses",
    "type": "relationship",
    "spec_version": "2.1",
    "created": "2025-02-12T15:55:27.447Z",
    "modified": "2025-02-12T15:55:27.448Z"
  },
  {
    "id": "relationship--bcb61751-e412-4c0e-8a9a-7b50be445b18",
    "source_ref": "x-oca-detection--334886c6-cb58-4aba-b470-0ddc361ace33",
    "target_ref": "x-oca-detector--f9ccdd3d-2217-45fd-8e65-055da8e66c3e",
    "relationship_type": "uses",
    "type": "relationship",
    "spec_version": "2.1",
    "created": "2025-02-12T15:55:55.840Z",
    "modified": "2025-02-12T15:55:55.841Z"
  },
  {
    "id": "relationship--c07c323d-6bb0-4f3c-9357-4716b29ceb26",
    "source_ref": "x-oca-detection--21192a86-057c-4c58-a711-4cddbee31912",
    "target_ref": "x-oca-detector--f9ccdd3d-2217-45fd-8e65-055da8e66c3e",
    "relationship_type": "uses",
    "type": "relationship",
    "spec_version": "2.1",
    "created": "2025-02-12T15:57:05.825Z",
    "modified": "2025-02-12T15:57:05.826Z"
  },
  {
      "id": "relationship--0759842c-e312-4b04-bdec-bac1bf0b9054",
      "source_ref": "x-oca-behavior--0bef5969-be8f-4959-adcf-168617415e33",
      "target_ref": "attack-pattern--60d0c01d-e2bf-49dd-a453-f8a9c9fa6f65",
      "type": "relationship",
      "spec_version": "2.1",
      "created": "2025-03-05T13:18:13.282Z",
      "modified": "2025-03-05T13:18:13.284Z",
      "relationship_type": "uses"

    },
    {
      "id": "relationship--36a08c58-4cef-4fdf-868a-3fd36cdd2eb4",
      "type": "relationship",
      "spec_version": "2.1",
      "created": "2025-03-05T13:23:28.421Z",
      "modified": "2025-03-05T13:23:28.422Z",
      "relationship_type": "related-to",
      "source_ref": "x-oca-playbook--447f032b-b463-4e09-a09f-e3610f59a8ab",
      "target_ref": "course-of-action--7ed3c8e5-945f-492d-ac70-225c07d38eeb"
    },
    {
      "id": "relationship--c06edde5-b299-44f9-a5e6-23ccc0ffe404",
      "type": "relationship",
      "spec_version": "2.1",
      "created": "2025-03-05T13:23:39.422Z",
      "modified": "2025-03-05T13:23:39.423Z",
      "relationship_type": "related-to",
      "source_ref": "x-oca-playbook--c2b057e4-f4ef-4423-ab11-1aef72e44003",
      "target_ref": "course-of-action--7ed3c8e5-945f-492d-ac70-225c07d38eeb"
    },
    {
      "id": "relationship--4d0b59d3-6d55-4f65-a48e-72d0f63f619e",
      "type": "relationship",
      "spec_version": "2.1",
      "created": "2025-03-05T13:25:17.181Z",
      "modified": "2025-03-05T13:25:17.181Z",
      "relationship_type": "detects",
      "source_ref": "course-of-action--7ed3c8e5-945f-492d-ac70-225c07d38eeb",
      "target_ref": "grouping--e6ebaa0f-c847-4a82-bf28-26c8a92bc705"
    },
    {
      "id": "relationship--dba41ba5-c3ca-4ea6-8453-73ea4f8f67cf",
      "type": "relationship",
      "spec_version": "2.1",
      "created": "2025-03-06T13:56:32.438Z",
      "modified": "2025-03-06T13:56:32.439Z",
      "relationship_type": "detects",
      "source_ref": "x-oca-detection--4f808859-8559-4809-8bde-6f231e30560d",
      "target_ref": "x-oca-behavior--0bef5969-be8f-4959-adcf-168617415e33"
    }
  ]
}
```