Google

Monthly Partner Series

Intro to Advanced Rule Management

May 2023

Agenda

- Chronicle SIEM Release Notes
- Elements of Advanced Rules
- Managing those Elements through APIs
- Example layout of Rules git repo
- Leveraging Rule versioning to Recover

Moving FAST!

We have limited time, so many topics will be touched but not covered in detail.

- Check out the Rules labs on the Partner Portal.
- Ask your PE about the Rules Workshop and the Entities & IOCs workshop
- Attend one of our Advanced Enablement Bootcamps.
- Read: https://medium.com/@thatsiemguy

  https://chronicle.security/blog/?filters=new-to-chronicle-series

- Special thanks to Eugene Dimarsky, John Stoner, Serhat Gulbetekin, and Oreste Dimaggio

Chronicle Release Notes

Deprecated	Chronicle forwarder executable for Windows is officially deprecated. The code has not been officially updated since 2022, except for specific break fixes. Use another collection mechanism for EVTX export. The docker container can receive on TCP/UDP/PCAP as well as local files (not the Event Viewer).	https://cloud.google.com/chronicle/docs/install/docker-forwarder-windows
Feature	You can now install and configure Chronicle forwarder for Windows on Docker. This Docker installation provides better security through isolation and the container distribution mechanism can be private and separate for Google Cloud and customers. This release also includes the following updates: • The forwarder signing key will be rotated every 6 months for security. You must update the Chronicle forwarder for Windows on Docker image every 6 months. • The minimum batch size for forwarder is now increased to 200KB for better performance. • Data compression is now enabled by default. It reduces the network bandwidth consumption by 80%. • Hot config loading is now supported and applies configuration changes within 5 minutes without the need to restart the forwarder. • Automatic buffering handles spikes in incoming traffic by efficiently using available memory on the host system. This feature is optional.	https://cloud.google.com/chronicle/docs/install/docker-forwarder-windows

Feature	Exclusions for Curated Detections You can now configure exclusions to more finely tune the results of the Curated Detections provided by the Google Cloud Threat Intelligence (GCTI) team.	https://cloud.google.com/chronicle/docs/detection/rule-exclusions
Feature	UDM Search Pivot Table The UDM Search Pivot Table enables you to further analyze your UDM search results, giving you the following capabilities: • Group search results by up to five UDM fields. • Perform aggregations (sum, count, count distinct, average, stddev, min, and max) on up to to five values within the UDM fields (for example, domains, users, and products). • Sort results of the pivot table (ascending, descending) This feature is being enabled for global customers in a phased manner and is expected to fully roll out over the next month.	https://cloud.google.com/chronicle/docs/investigation/udm-search#use_the_pivot_table_to_analyze_events
Feature	Chronicle released the following additional data enrichment and precomputed analytic capabilities that can provide additional context during an investigation: • Enriched entities with WHOIS data. • Enriched entities with VirusTotal relationship data. • Enriched events with VirusTotal file metadata. • Data from Google Cloud Threat Intelligence curated threat feeds. • Precomputed first-seen and last-seen occurrence for domains, IP addresses, and file hashes (SHA256, SHA1, MD5). • Precomputed first-seen occurrence for assets and users.	https://cloud.google.com/chronicle/docs/event-processing/data-enrichment https://cloud.google.com/chronicle/docs/investigation/use-enriched-data-in-search https://cloud.google.com/chronicle/docs/detection/use-enriched-data-in-rules

Mise en place

Ingredients needed.

1. List of rules to start with. https://github.com/chronicle/detection-rules
2. GCP project to host your rules, reference lists, etc.
3. Non-Ingest API key for your Partner NFR Chronicle SIEM instance.
4. Healthy Python environment. Local to your machine or via tools like Colab. https://collab.research.google.com

Suggested pairings

1. A list of regions or security zones
2. A list of forwarders including their configurations

Elements of Advanced Rules

NOTE: Most of these concepts can be tested in Warstory for operating examples.

- Namespaces, Labels and Reference Lists for Security Zones
- Multiple Event Syntax
- Entity Data Triggering
- Outcome Calculation

What are namespaces and labels

Namespace

A namespace is a metadata attribute that identifies logs from distinct network segments. In addition to creating a metadata key, it also segments IP schemes such that the same IP range can exist in multiple log streams and they can be operated on by different rules.

Label

A Label is an arbitrary metadata attribute that can be used in rules, but they do not affect the entity graph in the same manner as namespaces.

How do namespaces and labels affect rules?

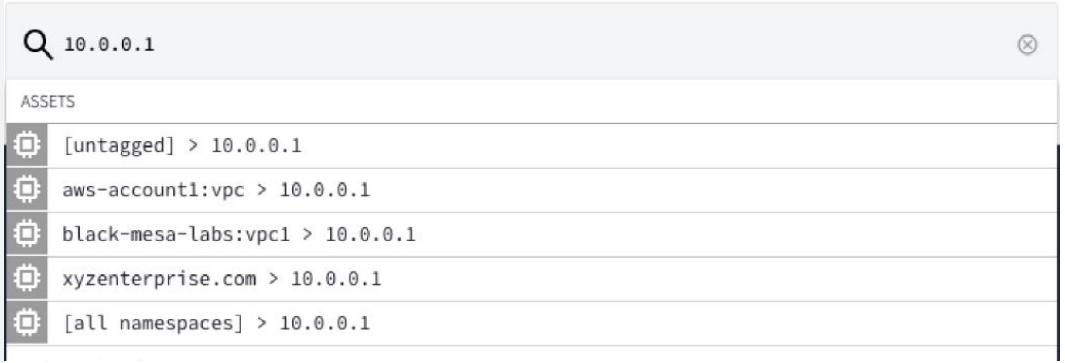
Define those zones! PCI? OT? Purdue Model Layer? AD Region?

Forwarder ID and Forwarder Name in UDM?

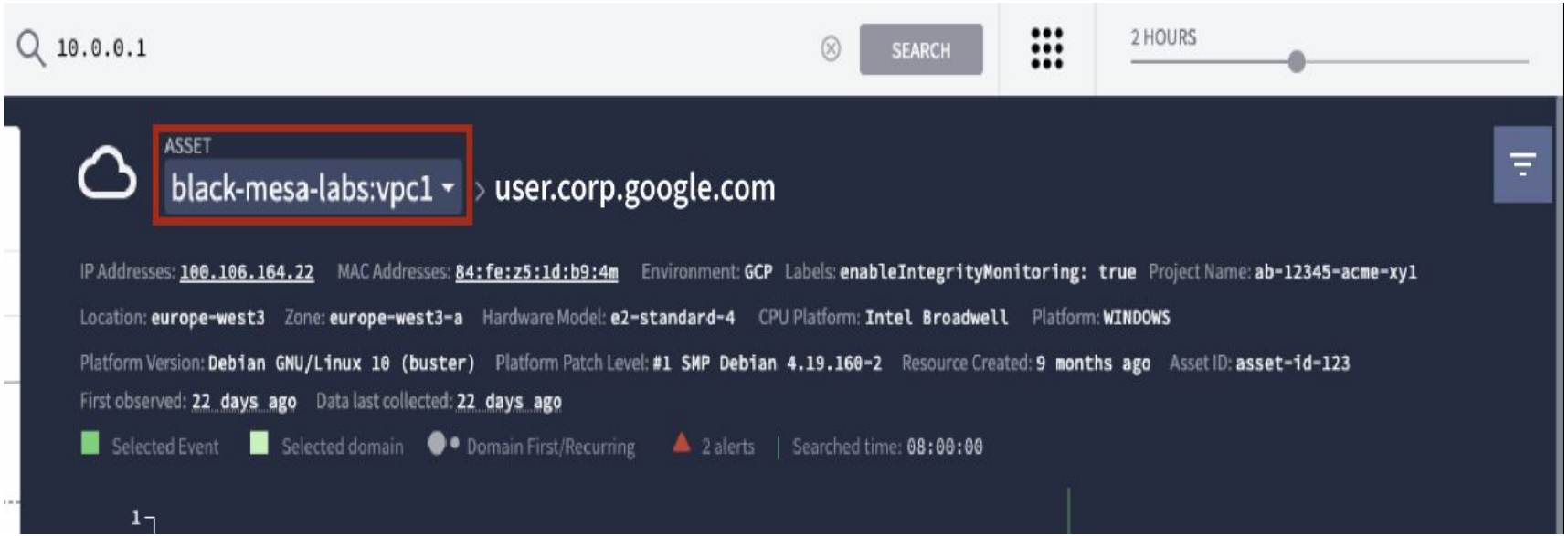
Namespace example

```
metadata:
  namespace: FORWARDER
collectors:
- syslog:
      common:
        metadata:
          namespace: CORPORATE
        batch_n_bytes: 1048576
        batch_n_seconds: 10
        data_hint: null
        data_type: NIX_SYSTEM
        enabled: true
      tcp_address: 0.0.0.0:30000
      connection_timeout_sec: 60
- syslog:
      common:
        batch_n_bytes: 1048576
        batch_n_seconds: 10
        data_hint: null
        data_type: WINEVTLOG
        enabled: true
      tcp_address: 0.0.0.0:30001
      connection_timeout_sec: 60
```

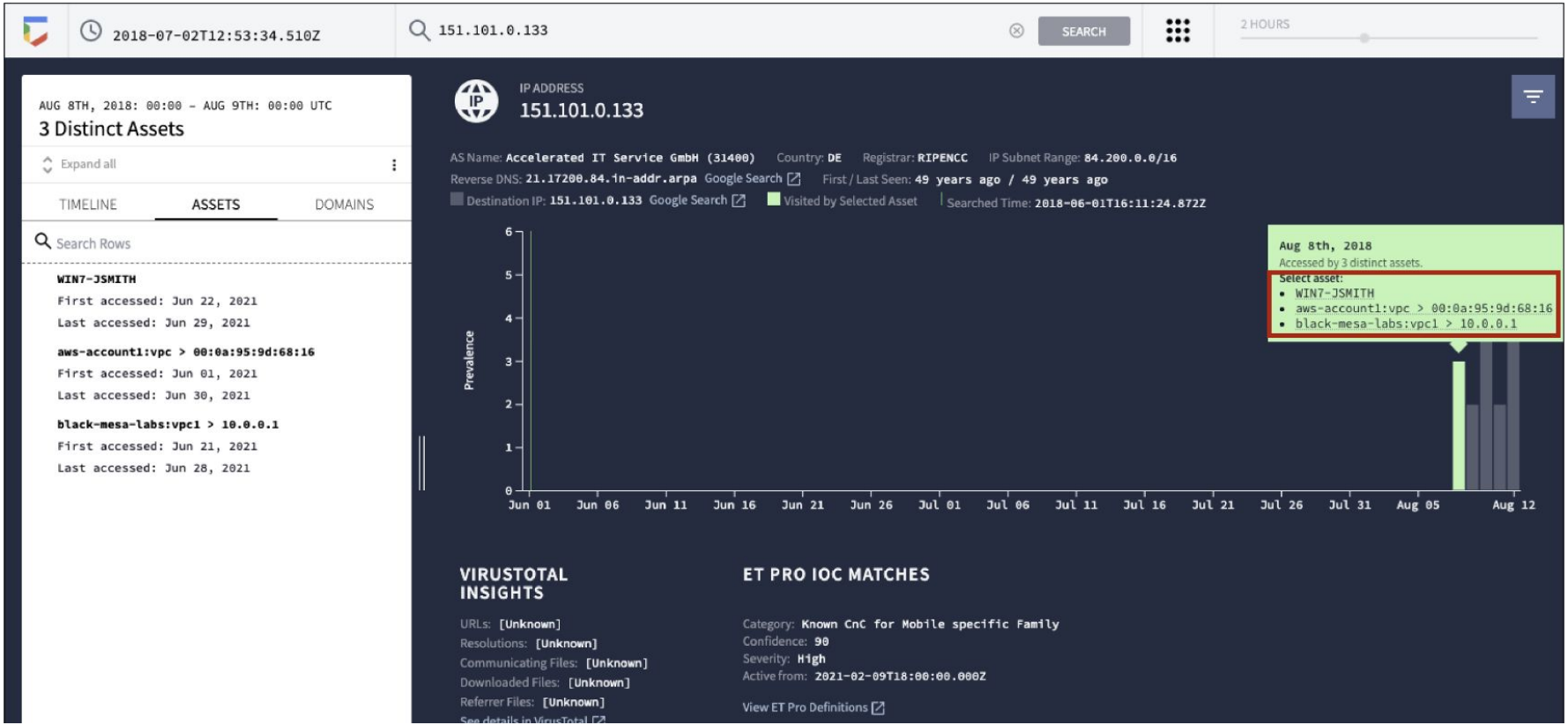
In the Search UI



In Asset View



In IP Address, Domain and Hash Views



Label configuration example

```
metadata:
  labels:
    foo: bar
    meow: mix
collectors:
syslog:
    common:
      metadata:
        labels:
          foo: baz
          meow: mix
      batch_n_bytes: 1048576
      batch_n_seconds: 10
      data_hint: null
      data_type: NIX_SYSTEM
      enabled: true
    tcp_address: 0.0.0.0:30000
    connection_timeout_sec: 60
```

Find it in UDM Search?

```
additional.fields["pod_name"] = "kube-scheduler"
metadata.ingestion_labels["MetadataKeyDeletion"] = "startup-script"
```

Use labels and namespaces in Rules?

```
events:
  // Network Connection Event
  $e.metadata.event_type = "NETWORK_CONNECTION"
  $e.target.ip = $tor_ip
  $e.metadata.namespace = “PCI”
  $e.metadata.ingestion_labels_key = “foo”
  $e.metadata.ingestion_labels_value = “baz”
// $e.metadata.ingestion_label[“foo”] = baz

  // Tor IP search in GCTI Feed
  $tor.graph.entity.artifact.ip = $tor_ip
  $tor.graph.metadata.entity_type = "IP_ADDRESS"
  $tor.graph.metadata.threat.threat_feed_name = "Tor Exit Nodes"
  $tor.graph.metadata.source_type = "GLOBAL_CONTEXT"
```

Reference Lists

A reference list is a generic list of values which can be used to analyze your data.
https://cloud.google.com/chronicle/docs/reference/reference-lists

Create lists that can be used in conjunction with rules

- Duplicate or add to existing lists

Rule Syntax

```
field/variables in %list_name
field/variables in cidr %list_name
field/variables in regex %list_name
```

Examples

- `$selection1.principal.hostname in %key_servers`
- `re.capture($selection1.target.process.file.full_path, /.*\\(.*)/) in %processes_of_interest`

Reference List Examples

NOTE: A Reference maps to one key only.

aws_accounts

- 127632175811
- 177632175808

key_server_labels

- activedir
- sql
- exchange
- sap

sensitive_namespaces

- PCI
- ITAR
- HIPAA

Entity Data

- Provides additional contextualization to the events
- A good bit of contextualization is absorbed into the event stream natively without adding the entity data model fields directly (Enrichment)
- Use Case
  - A rule could be run limiting the scope to just those in the Finance department based on LDAP data of the users
- Entity data is associated with the event at the time the event occurred
  - Example - Alice works in the Finance department until April 30 but on May 1 she moved to the Fraud department and her LDAP data (source of Entity data) is updated
  - Rules evaluating the Finance department activities would only apply to her during her time in Finance (up until April 30)

Rule Syntax

```
rule mitre_attack_T1021_002_windows_admin_share_with_user_enrichment {
 meta:

 events:
   $event.target.process.command_line = /net.*use.*(C|ADMIN|IPC)\$/ nocase
   $event.principal.user.userid = $userid

   $event.user.department != "Information Technology" or
   $event.principal.user.title = "Intern"

 match:
   $userid over 5m

 condition:
   $event
}
```

A brief interlude with Colab

Using APIs to make this happen.

I have all of these ingredients? What now?

Putting it all together.

An Example Directory Hierarchy:

reflist - to contain the reference lists

rule-creator - location for scripts that push/compare/enable rules in Chronicle

rules - the rules as discrete yaral files

https://github.com/chronicle/api-samples-python

https://github.com/chronicle/detection-rules

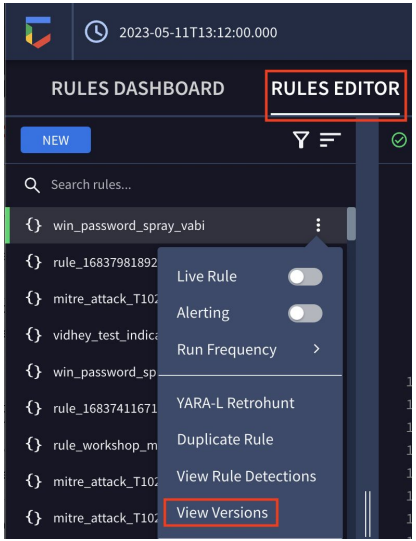
https://github.com/chronicle/GCTI

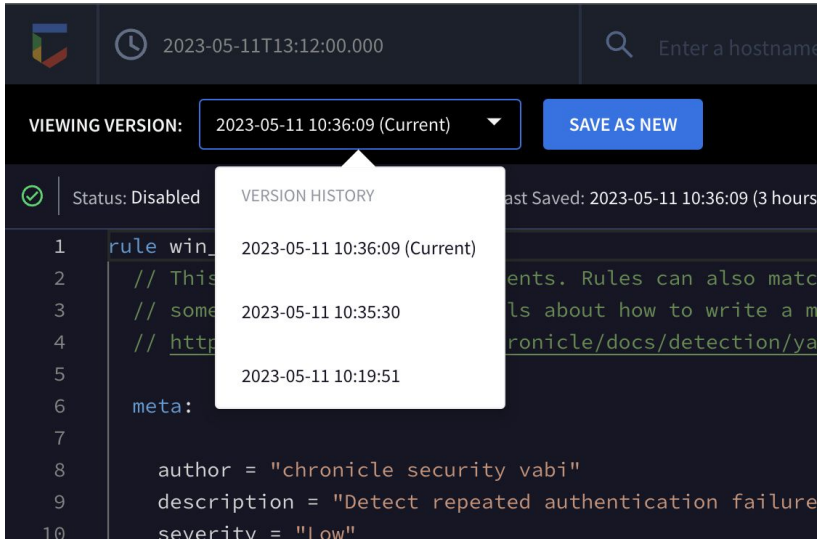
I think I broke it.

How do I recover?

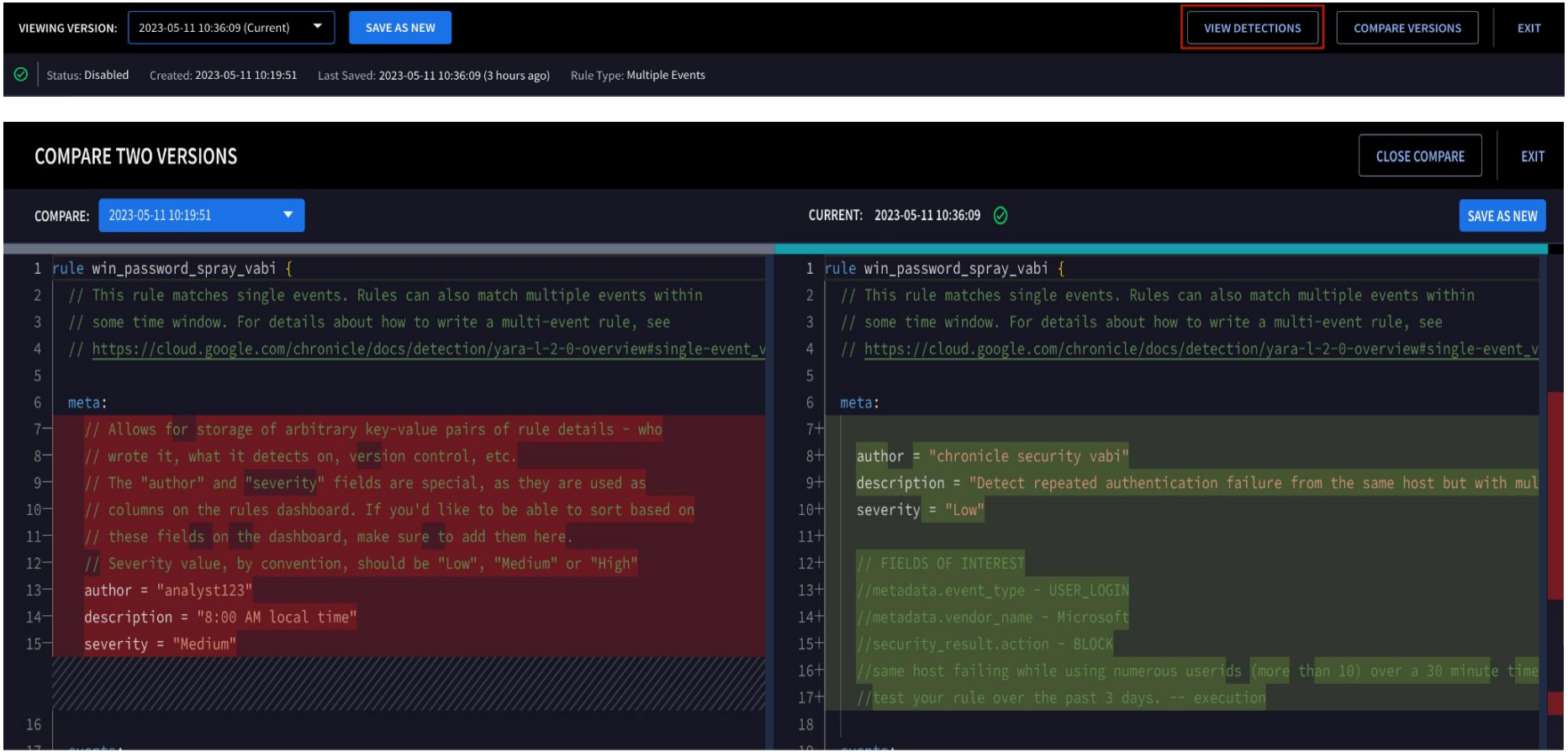
Repo destruction can happen. How can we help?

- Chronicle has a built in content versioning system.
- The API supports pulling and pushing different versions of content.
- You can enable a previous version of content without a local copy.





Difftastic!



A brief interlude with Colab

Using APIs to make this happen.

Thank you

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