What we'll cover today...

▸ **Why Event-Driven Ansible?**

▸ **What is Event-Driven Ansible?**

▸ **Demo time!**

▸ **How can I get started?**

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A brief history of IT Operations

The Old Way: Toil and Churn

The new way: Event-Driven Automated Ops
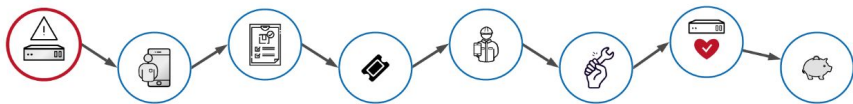
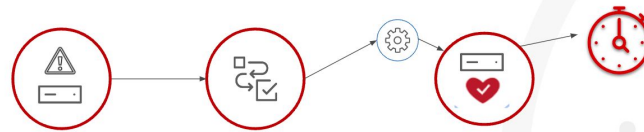**Outage resolution:**
Follow a people-intensive multi-step manual process including opening tickets and multiple handoffs.

Event-Driven outage resolution:
Receive event, matching to rule, respond and act automatically
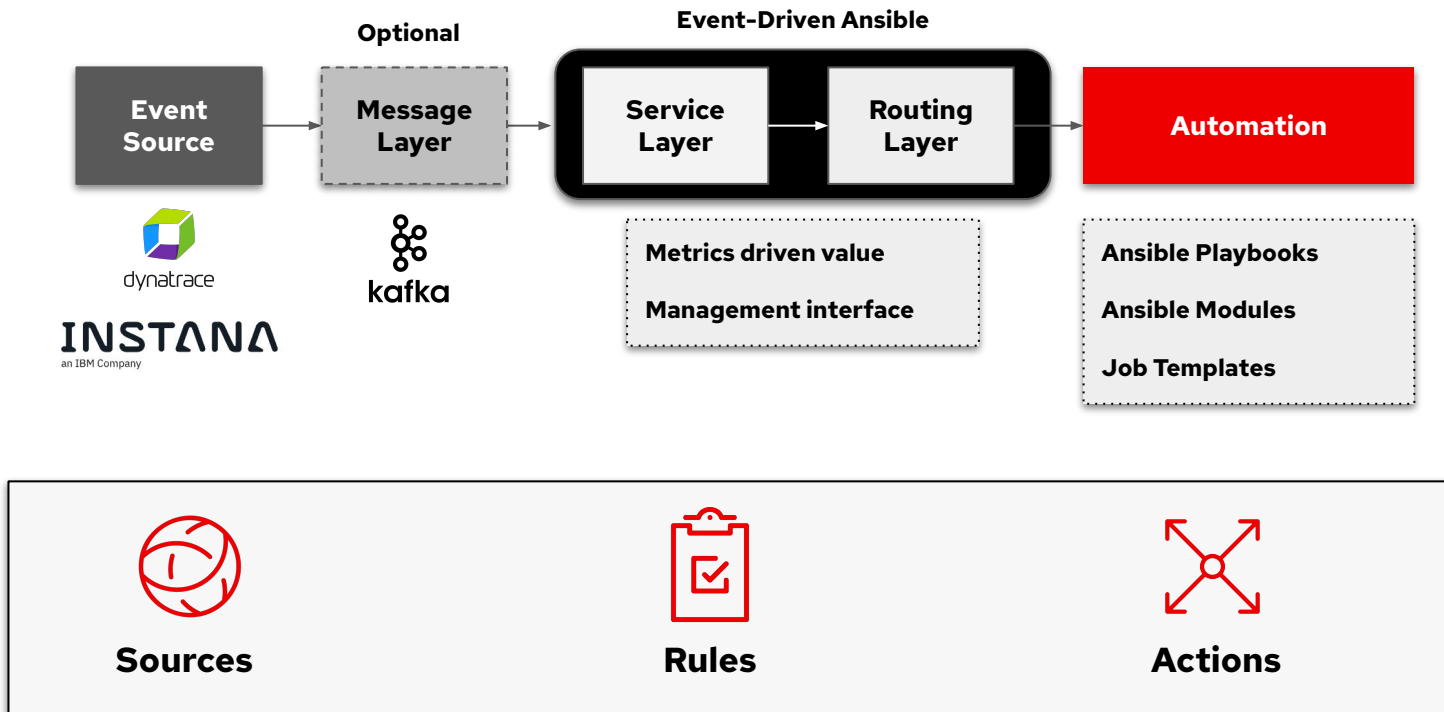
Security risk resolution:
Monitor to identify risk, notify and open a ticket, manually apply a patch or manually initiate automation job.

Event-Driven security risk resolution:
Receive risk event, match to rule, automatically apply patch to impacted inventory.

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Execution layers of event driven automation

Optional

Event-Driven Ansible

| Event Source | Message Layer | Service Layer | Routing Layer | Automation |

Metrics driven value

Management interface

Ansible Playbooks

Ansible Modules

Job Templates

dynatrace

INSTANA
an IBM Company

kafka

Sources

Rules

Actions

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Ansible Rulebooks

```yaml
---
- name: Capture alertmanager alerts
  hosts: all
  sources:
    - ansible.eda.alertmanager:
        host: 0.0.0.0
        port: 5050
        data_alerts_path: alerts
        data_host_path: labels.instance
        data_path_separator: .
        skip_original_data: true

  rules:
    - name: SELinux was disabled
      condition: event.alert.labels.alertname == "selinux disabled" and
                 event.alert.status == "firing"
      action:
        run_job_template:
          name: Apply baseline
          organization: Default
          job_args:
            limit: "{{ event.meta.hosts }}"
```

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Event–Driven Ansible rulesets. Event sources and rules.

What are they?

▸ Top level specification that defines event sources and rules.

▸ Defines properties such as Ansible inventory target hosts, gathering facts, and more.

Building blocks for Rulebooks

▸ Multiple rulesets can exist within an Ansible Rulebook.

```
---
- name: Capture alertmanager alerts
  hosts: all
```

Event–Driven Ansible sources. How are events gathered?

What are they?

▸ Event data is gathered from multiple sources using source plugins.

▸ One or multiple event source plugins can be configured in a ruleset.

Source plugins

▸ Puts events in the queue to be passed to rules engine.

Event filters

▸ Enables data transformation and clean-up before being passed to rules engine.

```yaml
---
- name: Capture alertmanager alerts
  hosts: all
  sources:
    - ansible.eda.alertmanager:
        host: 0.0.0.0
        port: 5050
        data_alerts_path: alerts
      filters:
        - ansible.eda.json_filter:
            include_keys: ['alert']
```

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Event–Driven Ansible rules. Evaluate and automate.

What are they?

▸ Rules determine actions taken on events based on conditions using simple YAML structure.
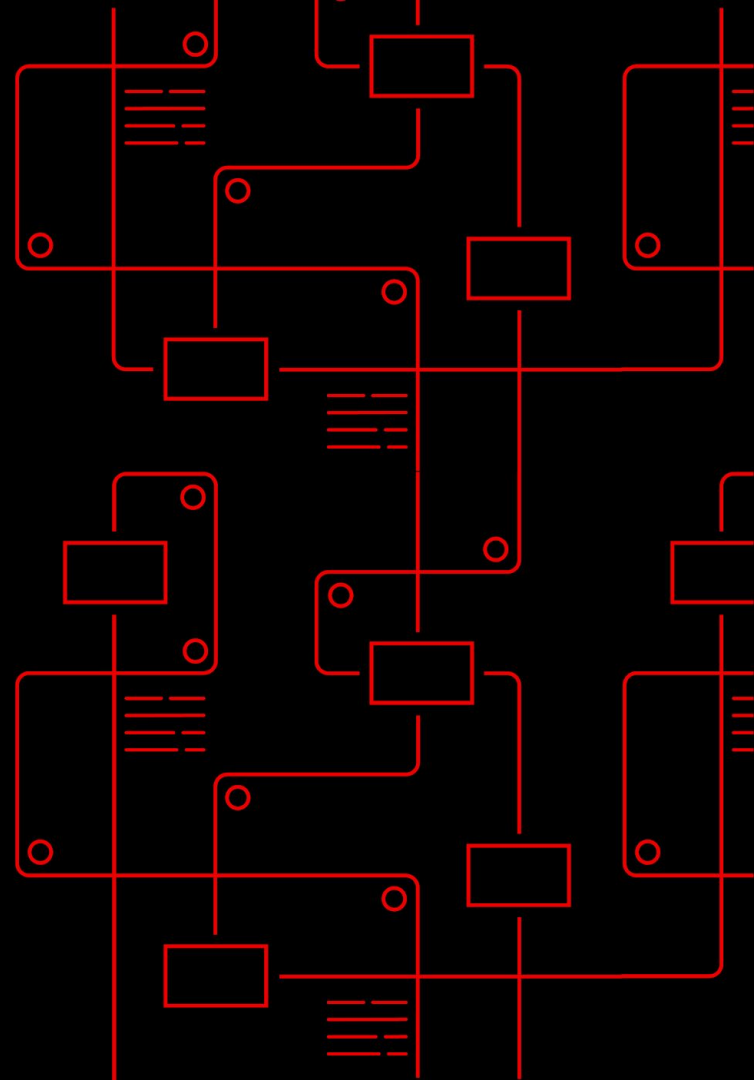
Conditions

▸ Evaluates event data using "If-Then-Else" structure.

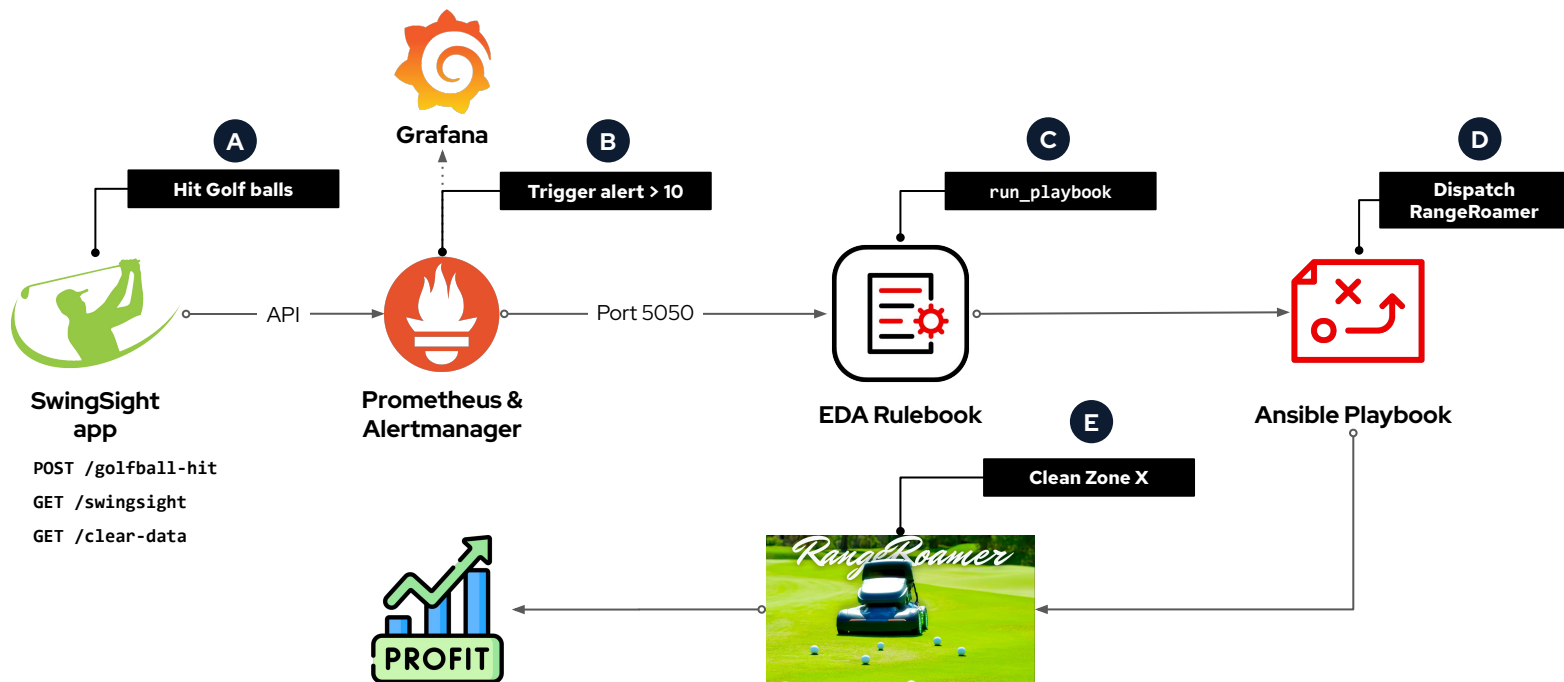▸ Single condition or multiple conditions supported.

Actions

▸ Triggered once rule conditions are met

▸ Processed sequentially once conditions are met.

```yaml
rules:
  - name: SELinux was disabled
    condition: event.alert.labels.alertname ==
               "selinux disabled"

    action:
      run_job_template:
        name: Apply baseline
        organization: Default
        job_args:
        limit: "{{ event.meta.hosts }}"
```
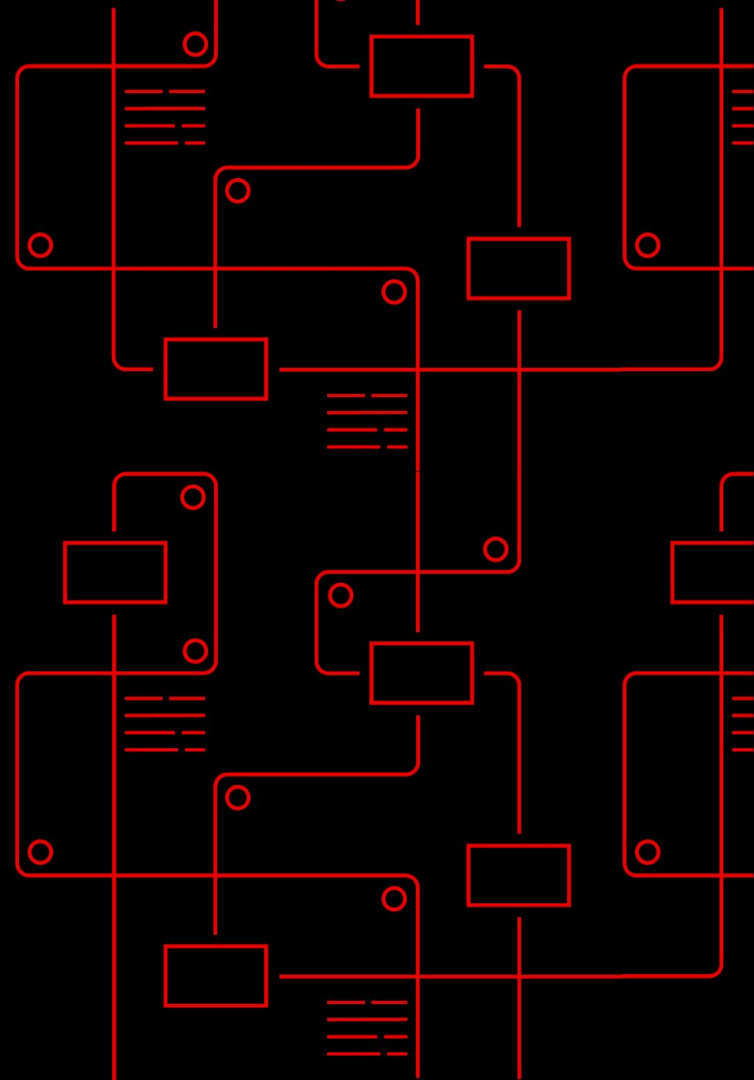
SwingSight demo overview

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SwingSight demo overview

A Hit Golf balls

B Trigger alert > 10

C `run_playbook`

D Dispatch RangeRoamer

E Clean Zone X

Grafana

SwingSight app

```
POST /golfball-hit
GET  /swingsight
GET  /clear-data
```

API

Prometheus & Alertmanager

Port 5050

EDA Rulebook
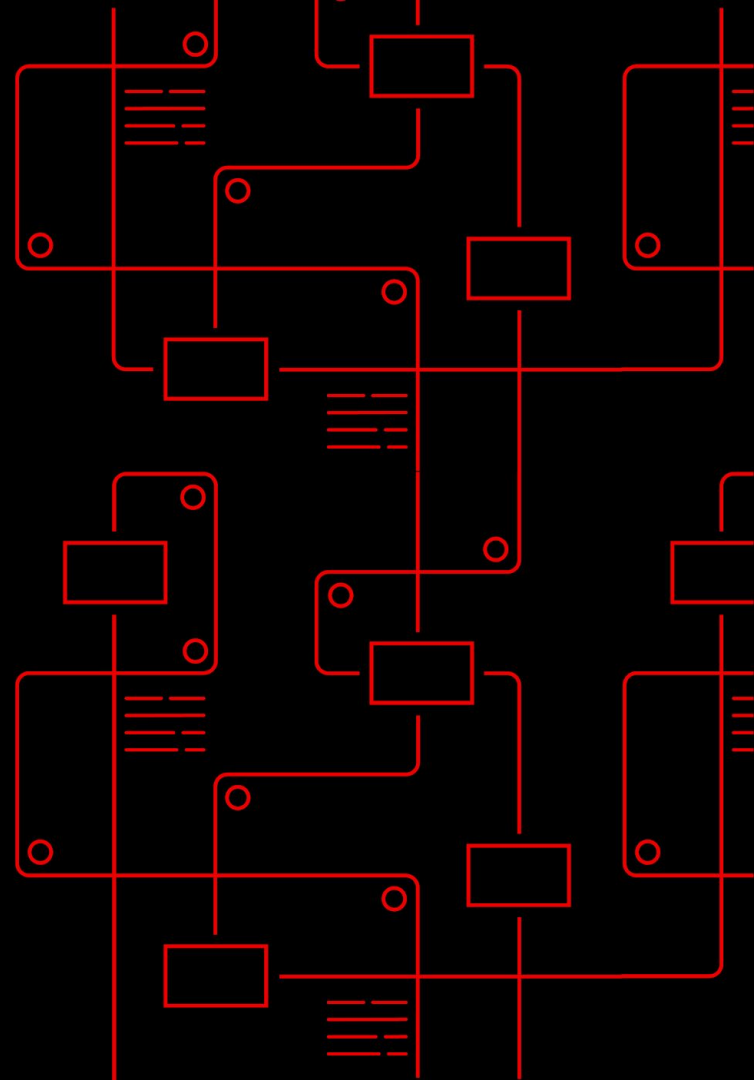
Ansible Playbook

PROFIT

RangeRoamer

SwingSite EDA workflow

A. Golfer hits golf balls to different zones.
B. > 10 golf balls fires an alert in Alertmanager.
C. EDA listens for webhook on TCP 5050. If conditions are met, runs Ansible Playbook.
D. Ansible Playbook dispatches RangeRoamer to the appropriate zone.
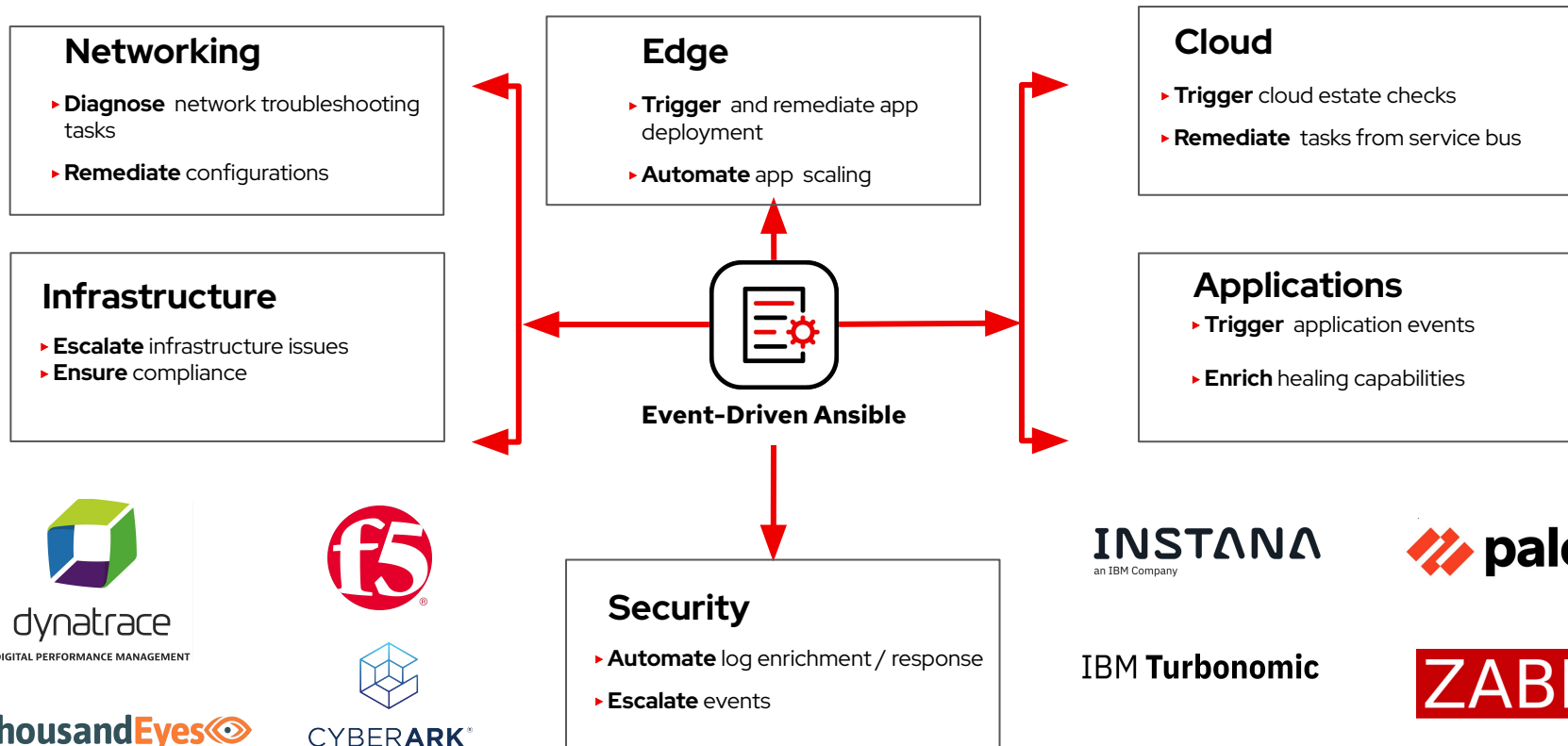E. RangeRoamer picks up golf balls

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Demo time!

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How do I get started?

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Event-Driven Ansible is **use case-friendly.**

Networking
- **Diagnose** network troubleshooting tasks
- **Remediate** configurations

Edge
- **Trigger** and remediate app deployment
- **Automate** app scaling

Cloud
- **Trigger** cloud estate checks
- **Remediate** tasks from service bus

Infrastructure
- **Escalate** infrastructure issues
- **Ensure** compliance

Event-Driven Ansible

Applications
- **Trigger** application events
- **Enrich** healing capabilities

Security
- **Automate** log enrichment / response
- **Escalate** events

dynatrace
DIGITAL PERFORMANCE MANAGEMENT

f5

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an IBM Company

paloalto
NETWORKS

ThousandEyes
part of Cisco

CYBERARK

IBM **Turbonomic**

ZABBIX

CROWDSTRIKE

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Three key technical learning resources
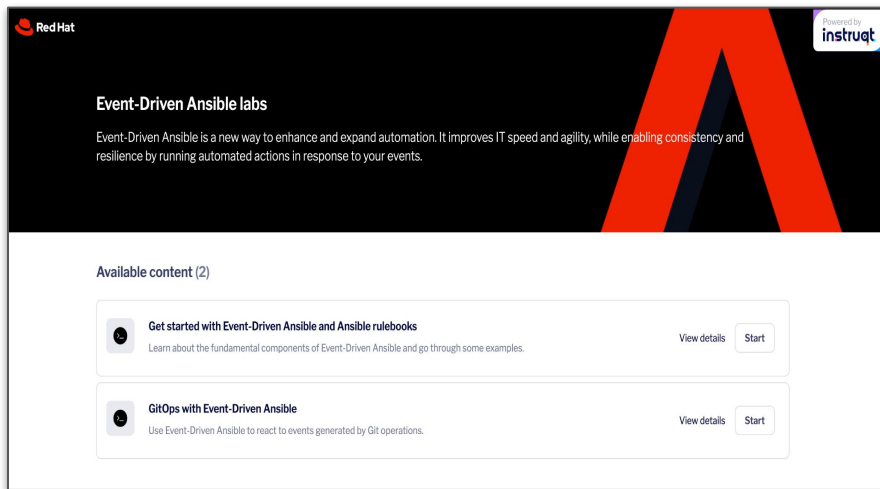
Technical blogs

Interactive labs
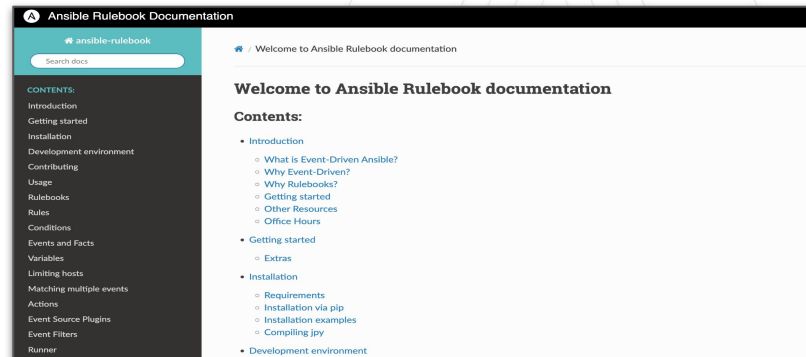
Rulebook docs

SwingSight demo resources.

Slide deck and recap

▸ https://github.com/craig-br/demos

SwingSight demo

▸ https://github.com/cloin/swingsight_metrics

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Event-Driven Ansible Resources

Get started on your event-driven automation journey

MANAGERS

Event-Driven Ansible web page

451 Research: The Impact of
Event-Driven Automation
on IT Operations

IDC QuickTake AnsibleFest 2922,
including Event-Driven Ansible

Blog: Highly Efficient, Resilient IT
operations

Blog: Event-Driven Ansible is Here!

TECHNICAL ROLES

Event-Driven Ansible web page

Free Self-paced lab

Ansible Rulebook documentation

Blog: Getting started with Event-Driven
Ansible

Blog: Event-Driven Ansible is Here!

Blog: Creating custom plugins

PARTNERS

Event-Driven Ansible web page

Free Self-paced lab

Blog: Creating custom plugins blog

Contact the partner team:
ansible-partners@redhat.com

ansible.com/event-driven

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Thank you

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