CDM Generic Instance

Overview and Live Demonstration

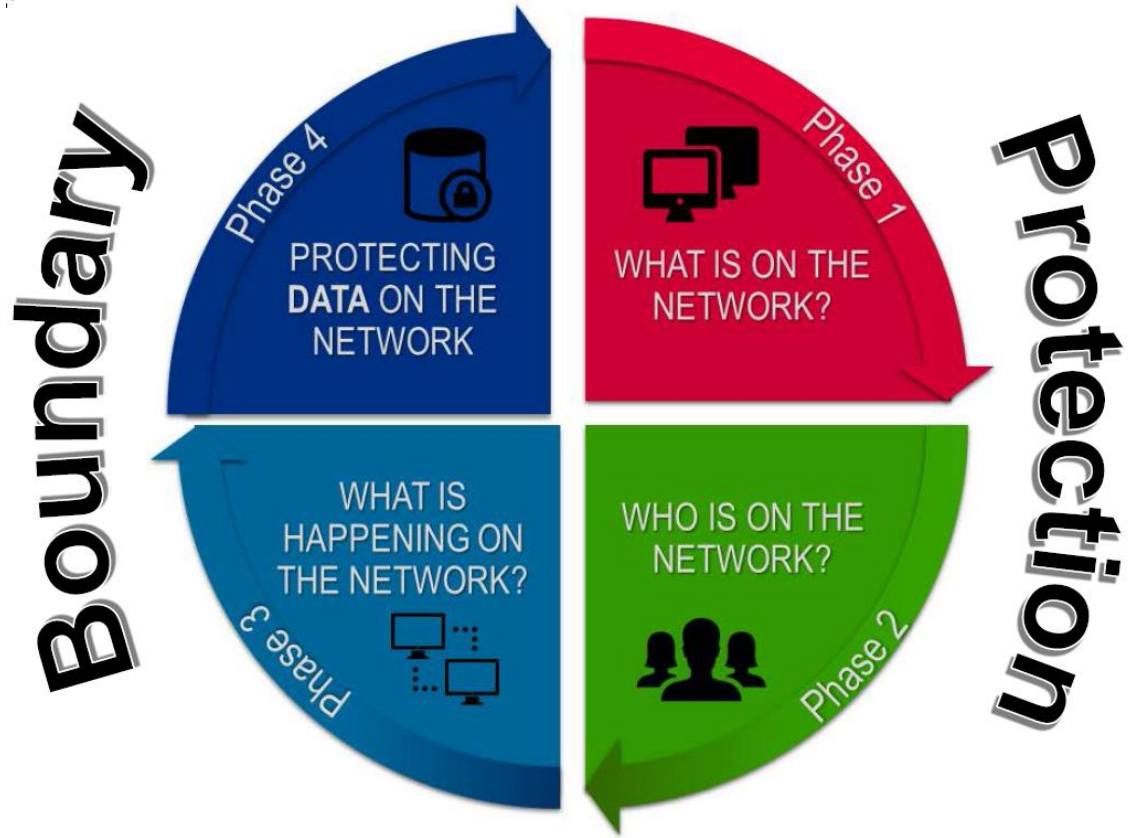
MITRE

Agenda

- General CDM Overview
- Further CDM Capability Areas and Strategic Goals
- Generic Instance – Goals
- Strategic Value
- CDM Generic Instance Build
- Lab Architecture- Phase 1 Tools and Data Flow
- Phase 1 Tools – Notable Points
- Demo

General CDM Overview

- **Continuous Diagnostics and Mitigation (CDM) is a major DHS program.**
  - Purpose: Provide a structured implementation of Information Security Continuous Monitoring (***ISCM***) per NIST 800-137.
- **The CDM program has these components.**
  - Multiple phases of implementation
    - **Phase 1 – What is on the Network**
    - Phase 2 – Who is on the Network
    - Phase 3 – What is happening on the Network
    - BOUND – How are my network boundary controls and data protection capabilities (encryption and data loss prevention)
    - Phase 4 – Ongoing Authorization Automation
- **CDM implementation is managed by the DHS CDM Program Management office (PMO).**



MITRE

Further CDM Capability Areas and Strategic Goals

- **Bound-E and Bound-F**
  - Monitor and Manage Encryption Mechanisms Controls and Manage Network Filters and Boundary Controls
- **Phase 3 – Manage Events and Ongoing Assessments**
  - Detection of security violation events and classification of event impact
  - Ongoing Assessment is the automation of monitoring NIST Special Publication (SP) 800-53 controls that are related to CDM Phase 1, Phase 2, BOUND, and Phase 3 network and infrastructure components.
- **Phase 4 – Operate, Monitor and Improve (OMI)**
  - Ongoing Authorization uses the results of the MNGEVT ongoing assessment of NIST SP 800-53 controls for all previous phases of CDM as a set of inputs for ongoing authorization processes.
- **Changing the Paradigm**
  - Automated Federal Risk Scoring, Automated FISMA Metric Reporting, Automation of Security Assessment & Authorization for participating CDM Departments and Agencies

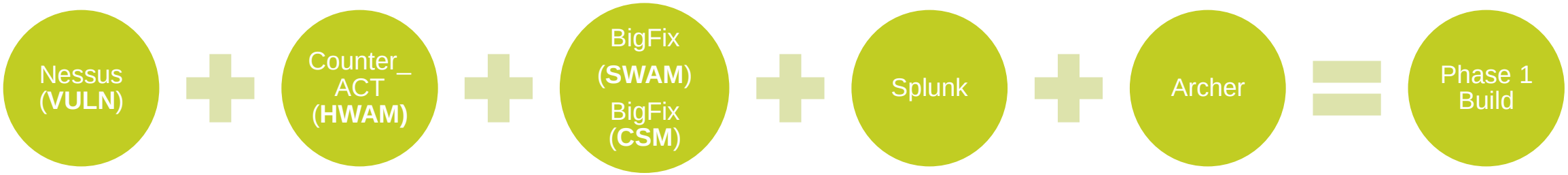
Generic Instance – Goals

1. **Build a CDM Generic Instance consistent with evolving CDM requirements**
2. **Apply CDM BPA Attachment N (Phase 1), N2 (Phase 2), and N..*i (Phase n)* technical requirements**
3. **Integrate and correlate data in Archer Dashboards**
4. **Provide stakeholders virtual and physical access to the CDM generic instance**
5. **COTS Vendor Outreach and Engagement**

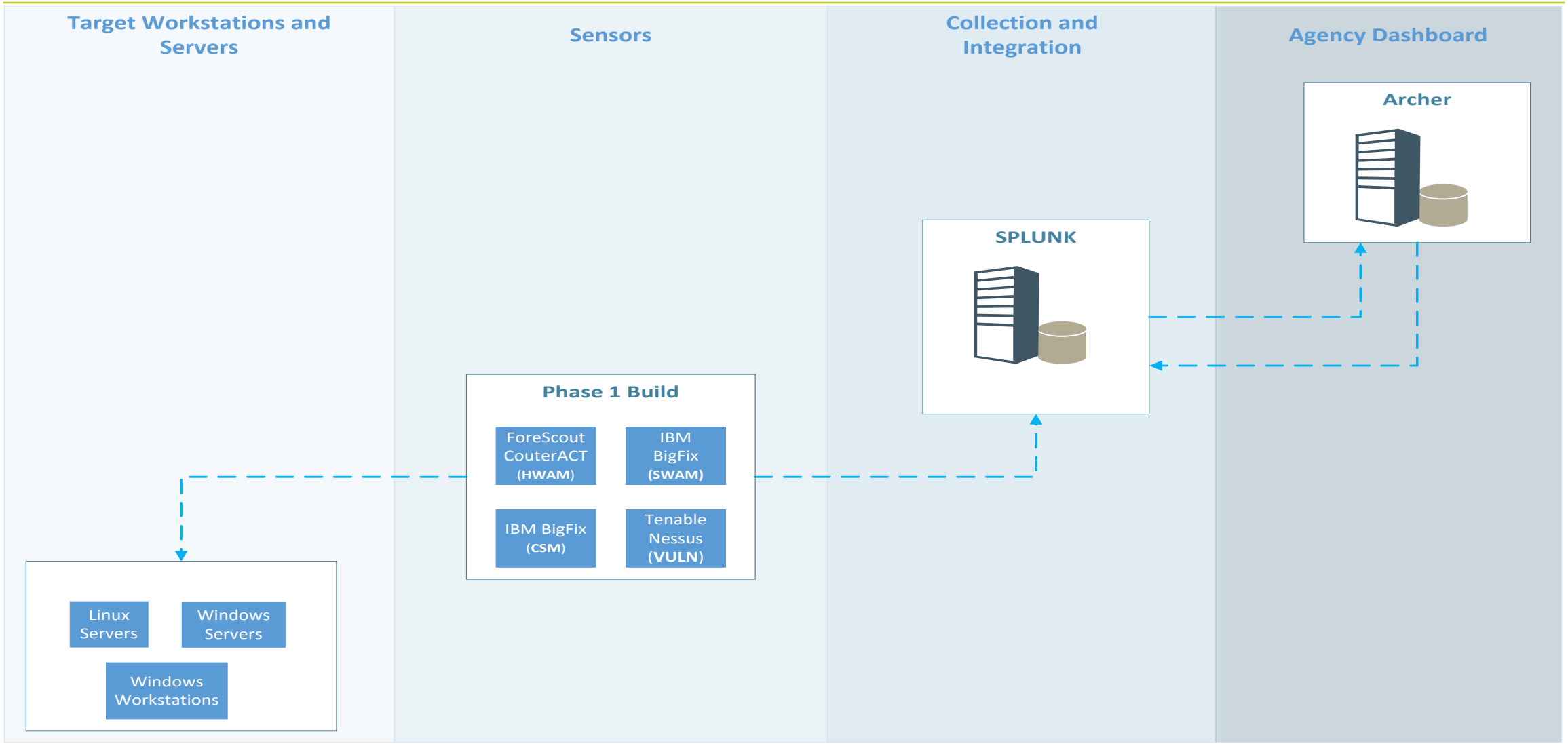
Strategic Value

- **Provide Sponsor early access to configured dashboard releases**
- **Independent instantiation of Phase *n***
  - Phase 1 was conceived without interaction or input from **CMaaS** Integrators or external entities
  - Experience Phase *n* capabilities in an controlled environment
- **Ready access to fully licensed, enterprise COTS, software Sandboxed environment**
  - Permits for access to software ahead of CMaaS installation and integration
- **Generic Instance may be a conduit for training and/or other stakeholder engagement as determined by Sponsors (FNR, NIST)**

CDM Generic Instance Build



Lab Architecture- Phase 1 Tools and Data Flow



MITRE

Phase 1 Tools – Notable Points

- **Archer**
  - Offices and Containers
    - Network objects are associated with Organizational Units; everything is in AD
  - Data Feeds
    - Archer to Splunk integration via Splunk API
- **CounterACT (HWAM)**
  - Near real time discovery
  - Policies define compliance (definitions of what is compliant) and object role definitions
  - Monitors network via Port Mirroring
- **Splunk**
  - Saved Searches return data via API calls
  - Only ingesting minimal data needed for Archer
- **BigFix (SWAM, CSM)**
  - STIGs are used to enforce FISMA controls on all endpoints and workstations
  - Used to deploy patches to correct vulnerabilities
  - Captures software inventory
- **Tenable Nessus (VULN)**
  - Scheduled vulnerability scans
  - Automatic updates from NVD

Demo

Thank You!

Questions/Comments