servicenow

Business Aware Operations Management

People. Process. Patterns.

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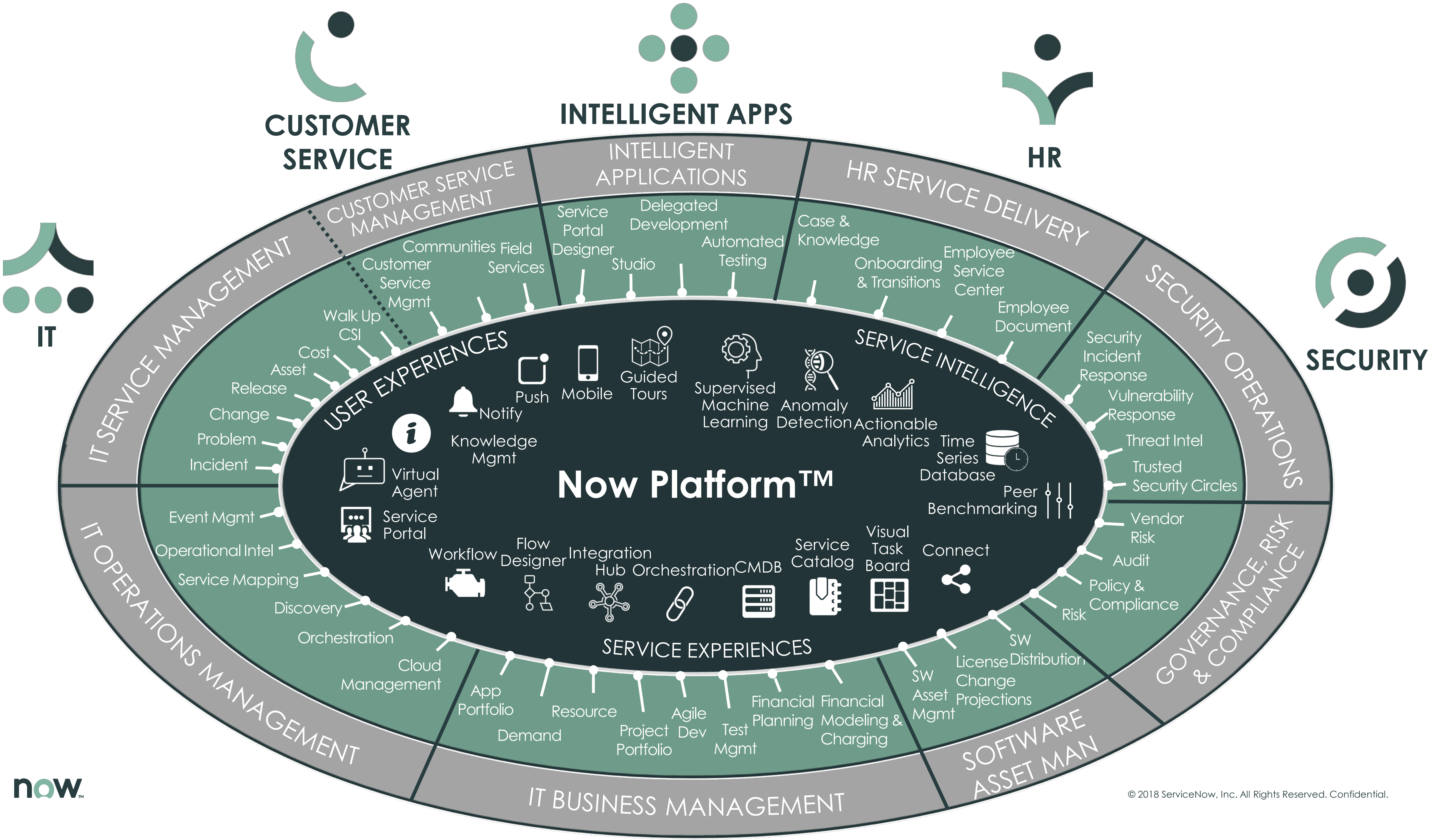

CUSTOMER SERVICE

INTELLIGENT APPS

HR

SECURITY

IT

CUSTOMER SERVICE MANAGEMENT
Communities
Field Services
Customer Service Mgmt
Walk Up
CSI

INTELLIGENT APPLICATIONS
Service Portal Designer
Delegated Development
Studio
Automated Testing

HR SERVICE DELIVERY
Case & Knowledge
Onboarding & Transitions
Employee Service Center
Employee Document

SECURITY OPERATIONS
Security Incident Response
Vulnerability Response
Threat Intel
Trusted Security Circles

GOVERNANCE, RISK & COMPLIANCE
Vendor Risk
Audit
Policy & Compliance
Risk

SOFTWARE ASSET MAN
SW Distribution
License Change
Projections
SW Asset Mgmt

IT BUSINESS MANAGEMENT
App Portfolio
Demand
Resource
Project Portfolio
Agile Dev
Test Mgmt
Financial Planning
Financial Modeling & Charging

IT OPERATIONS MANAGEMENT
Event Mgmt
Operational Intel
Service Mapping
Discovery
Orchestration
Cloud Management

IT SERVICE MANAGEMENT
Cost
Asset
Release
Change
Problem
Incident

USER EXPERIENCES
Notify
Push
Mobile
Guided Tours
Knowledge Mgmt
Virtual Agent
Service Portal

SERVICE INTELLIGENCE
Supervised Machine Learning
Anomaly Detection
Actionable Analytics
Time Series Database
Peer Benchmarking

Now Platform™

SERVICE EXPERIENCES
Workflow
Flow Designer
Integration Hub
Orchestration
CMDB
Service Catalog
Visual Task Board
Connect

now™

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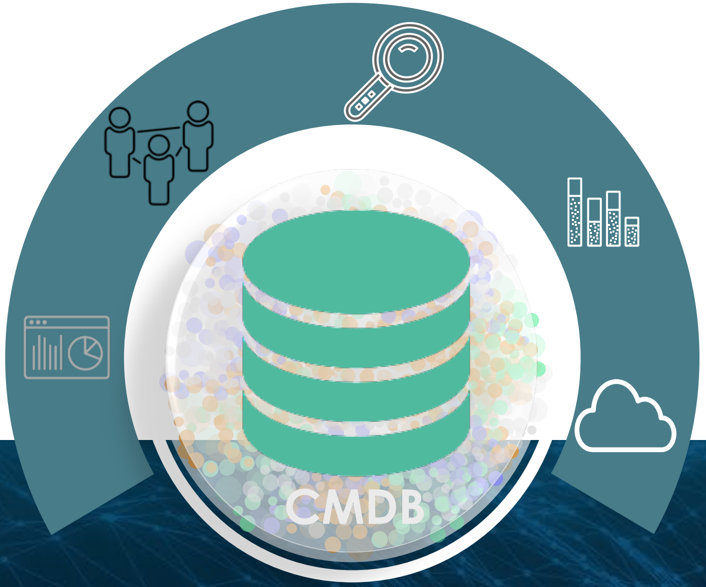
End-to-end solution

For business services deployed on-premises or cloud…

Visibility

across operations estate and all software



Health

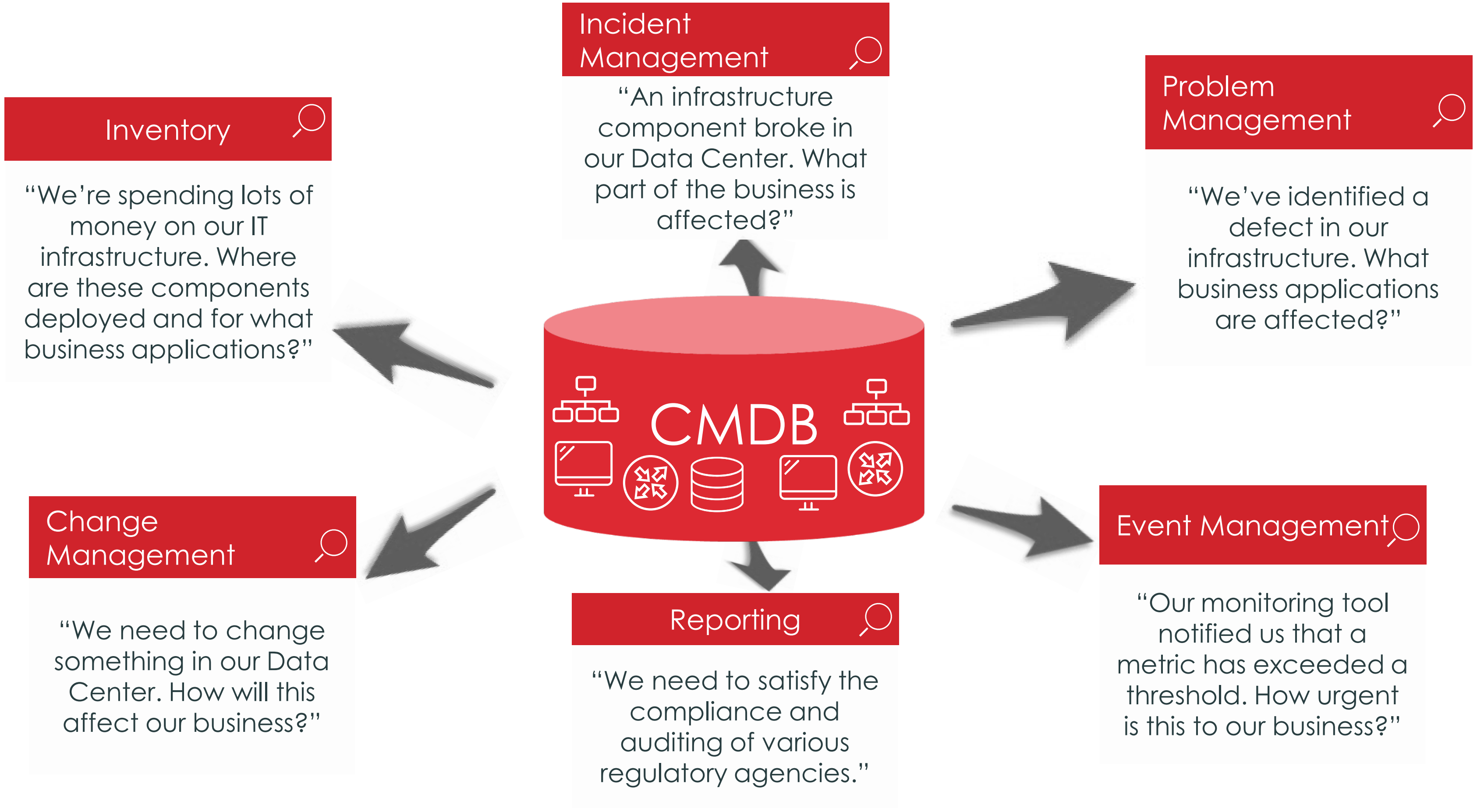
of business services, with AIOps

Optimization

of cloud and software spend

CMDB Overview: Why do you need a CMDB

A Configuration Management Database is a powerful single system of record of configuration items and when properly deployed, it provides an essential component for IT services



Incident Management

"An infrastructure component broke in our Data Center. What part of the business is affected?"

Inventory

"We're spending lots of money on our IT infrastructure. Where are these components deployed and for what business applications?"

Problem Management

"We've identified a defect in our infrastructure. What business applications are affected?"

Change Management

"We need to change something in our Data Center. How will this affect our business?"

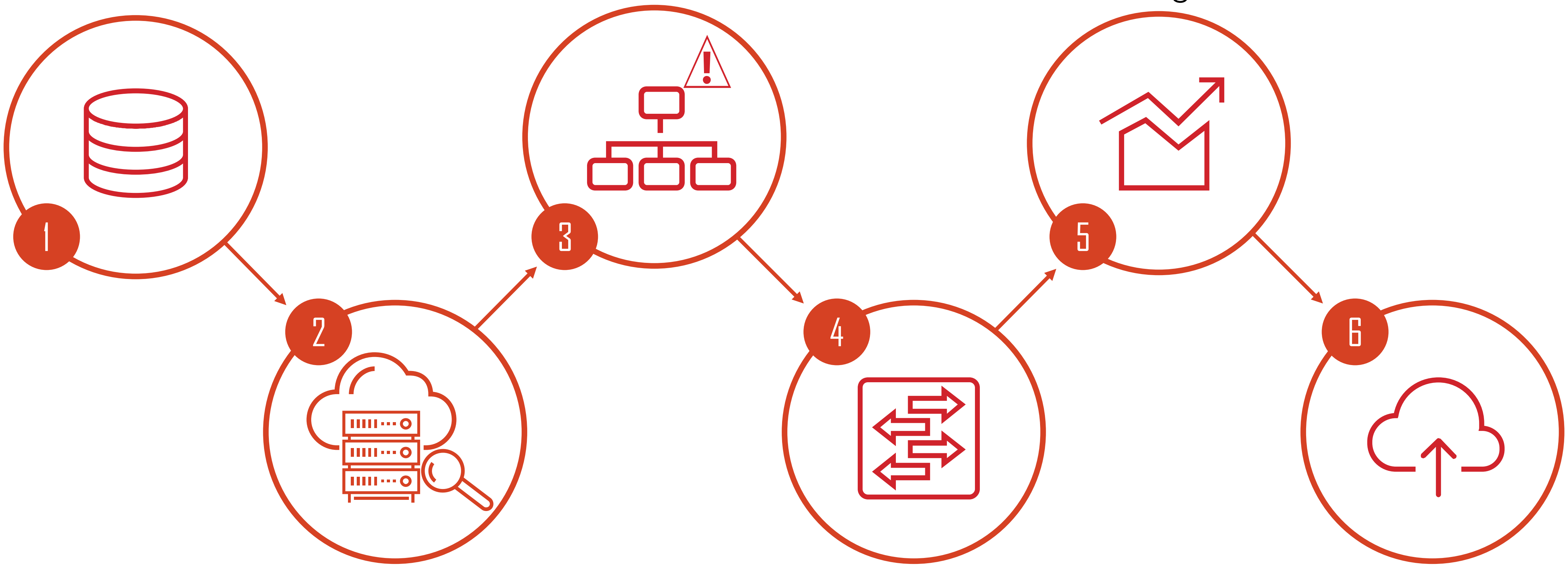
Reporting

"We need to satisfy the compliance and auditing of various regulatory agencies."

Event Management

"Our monitoring tool notified us that a metric has exceeded a threshold. How urgent is this to our business?"

ServiceNow Service Aware CMDB Journey



Establish Centralized CMDB

Discover Infrastructure & Applications

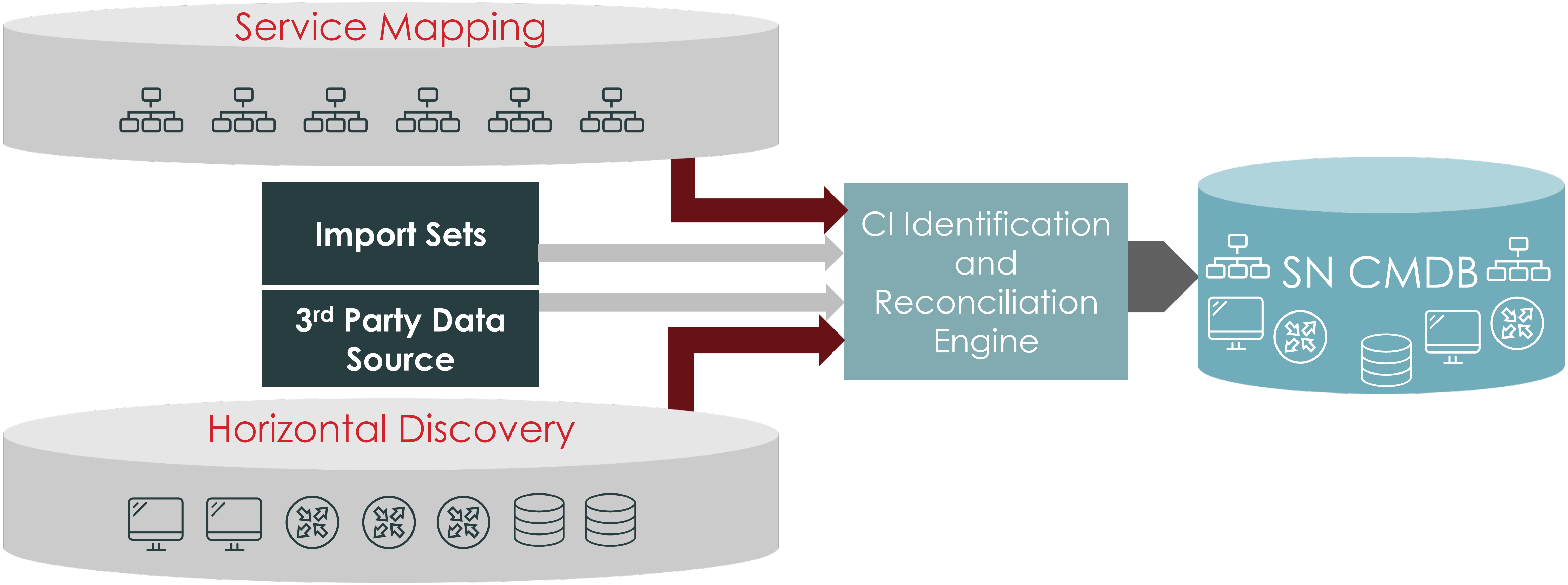
Model Service Dependencies

Monitor Health of CMDB & Services

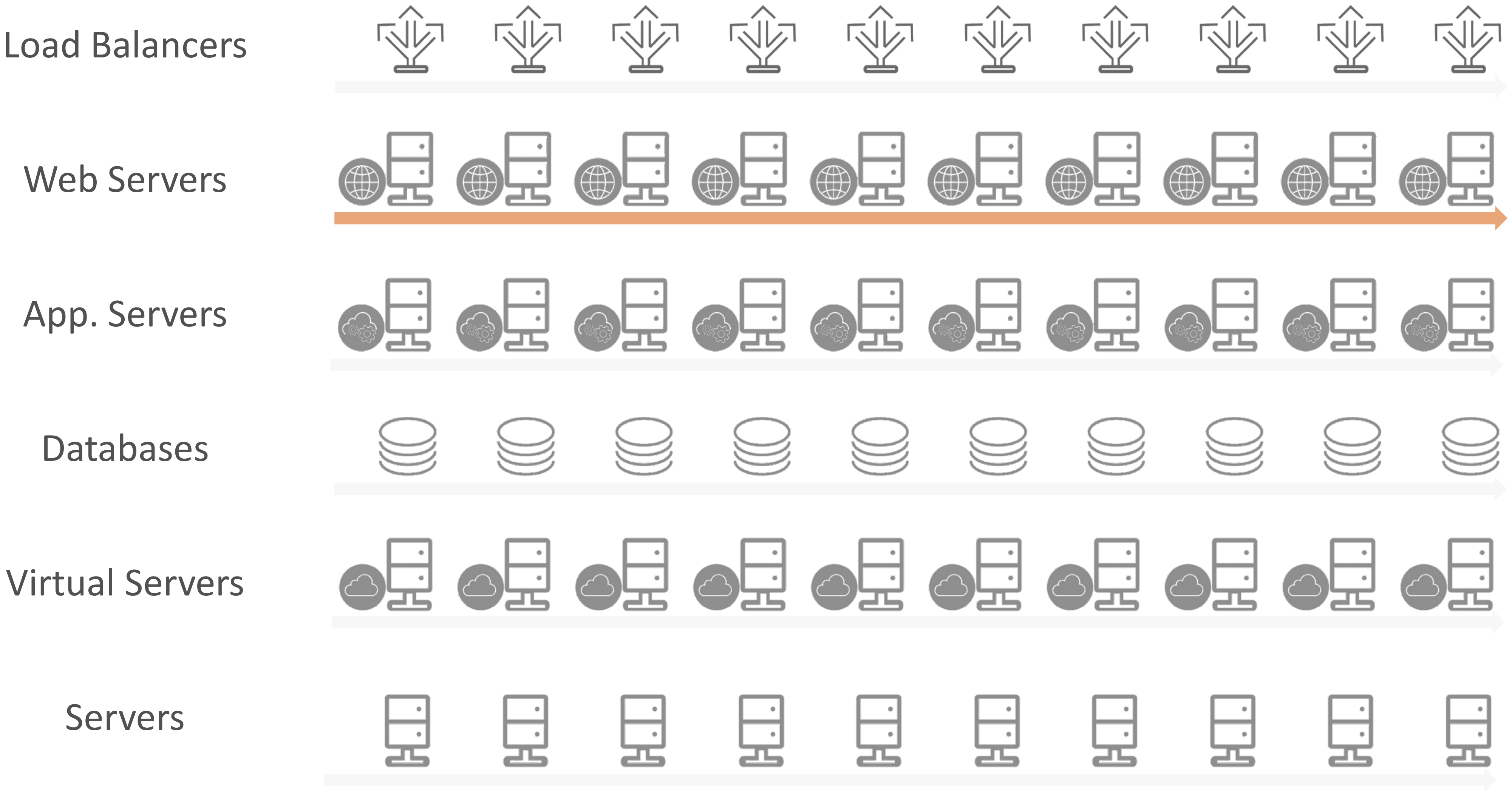
Manage Incident and Outages

Automate Processes

CMDB Identification and Reconciliation



Traditional Infrastructure Discovery



Load Balancers

Web Servers

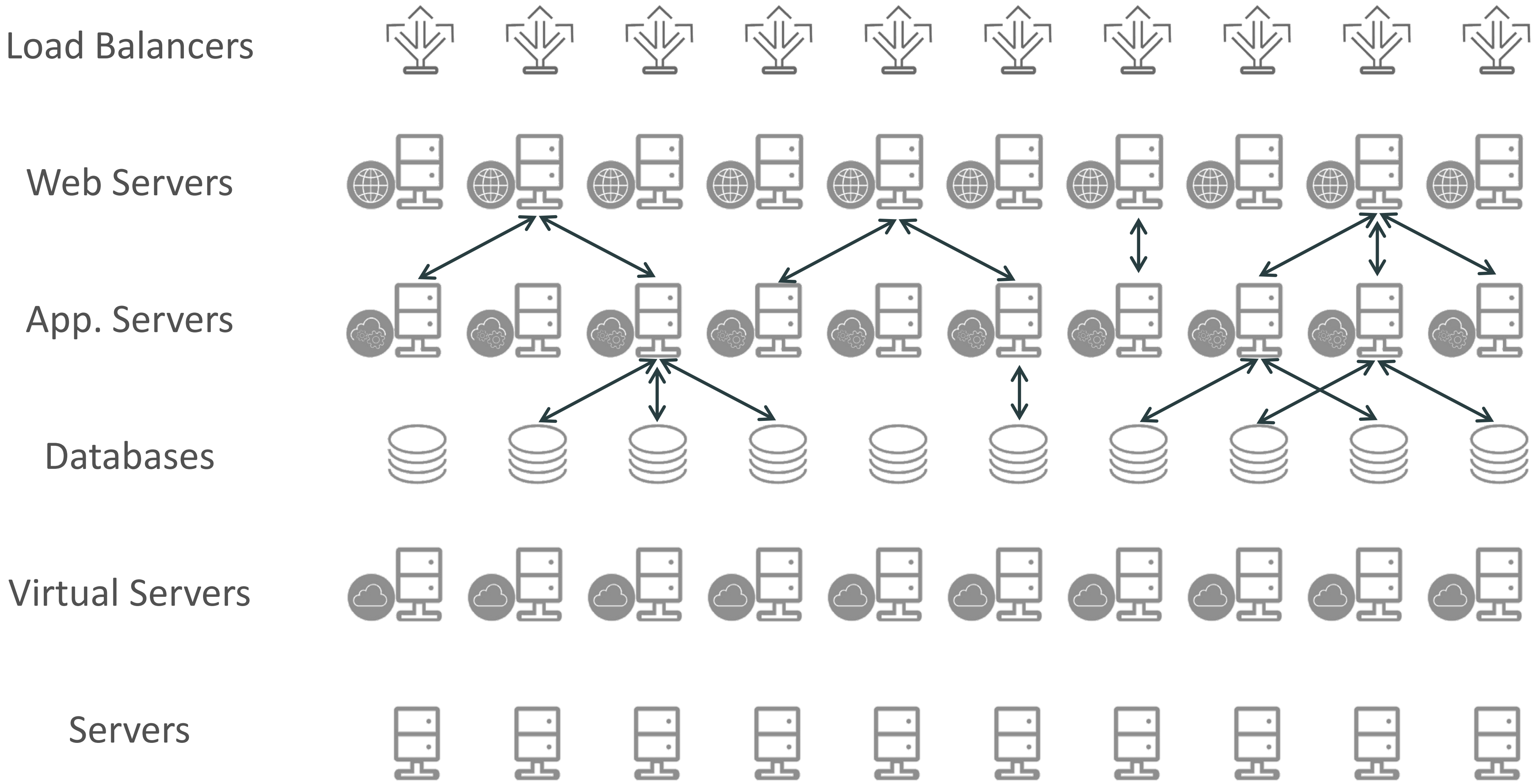
App. Servers

Databases

Virtual Servers

Servers

Application Dependency Mapping (also Discovery)



Load Balancers

Web Servers

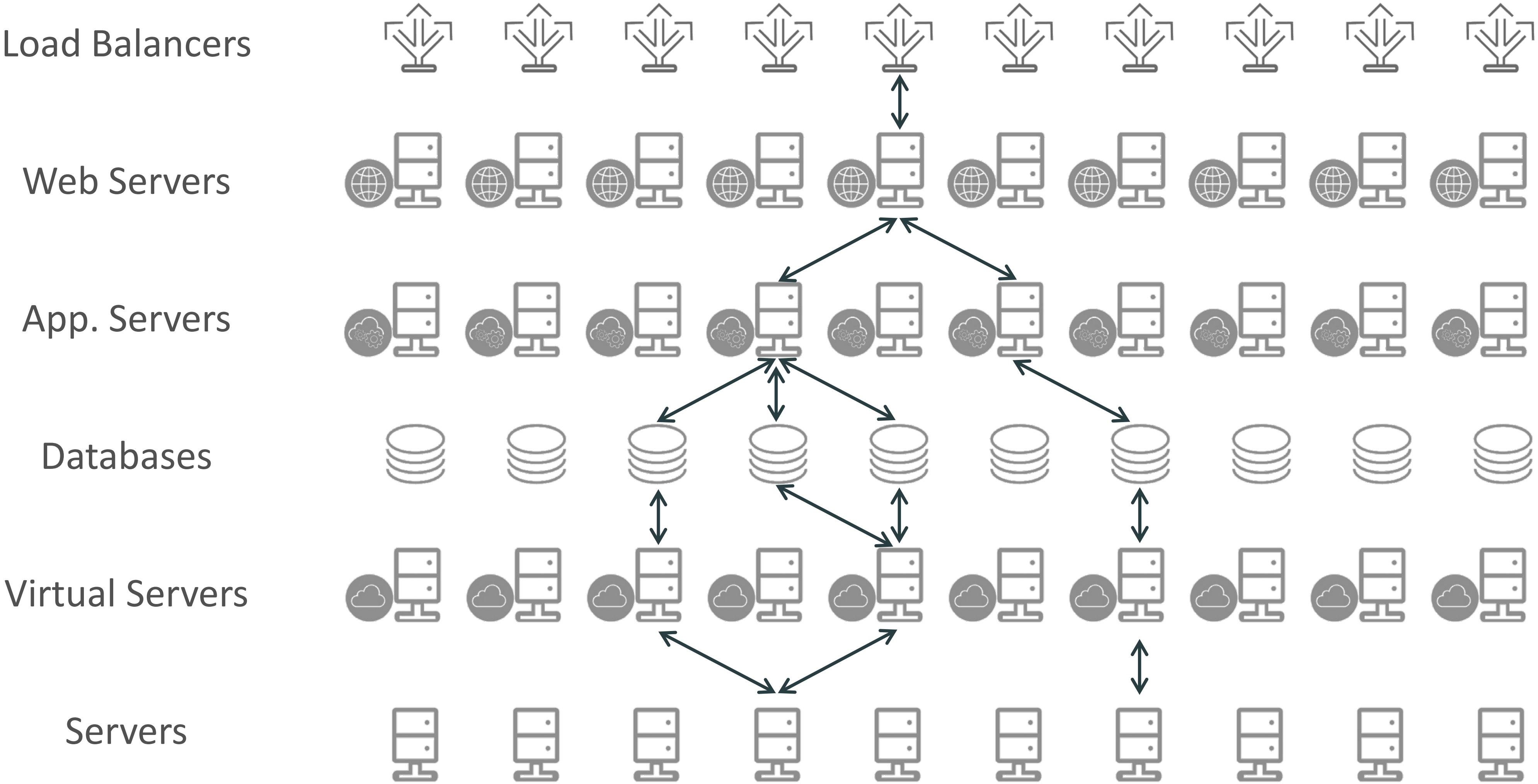
App. Servers

Databases

Virtual Servers

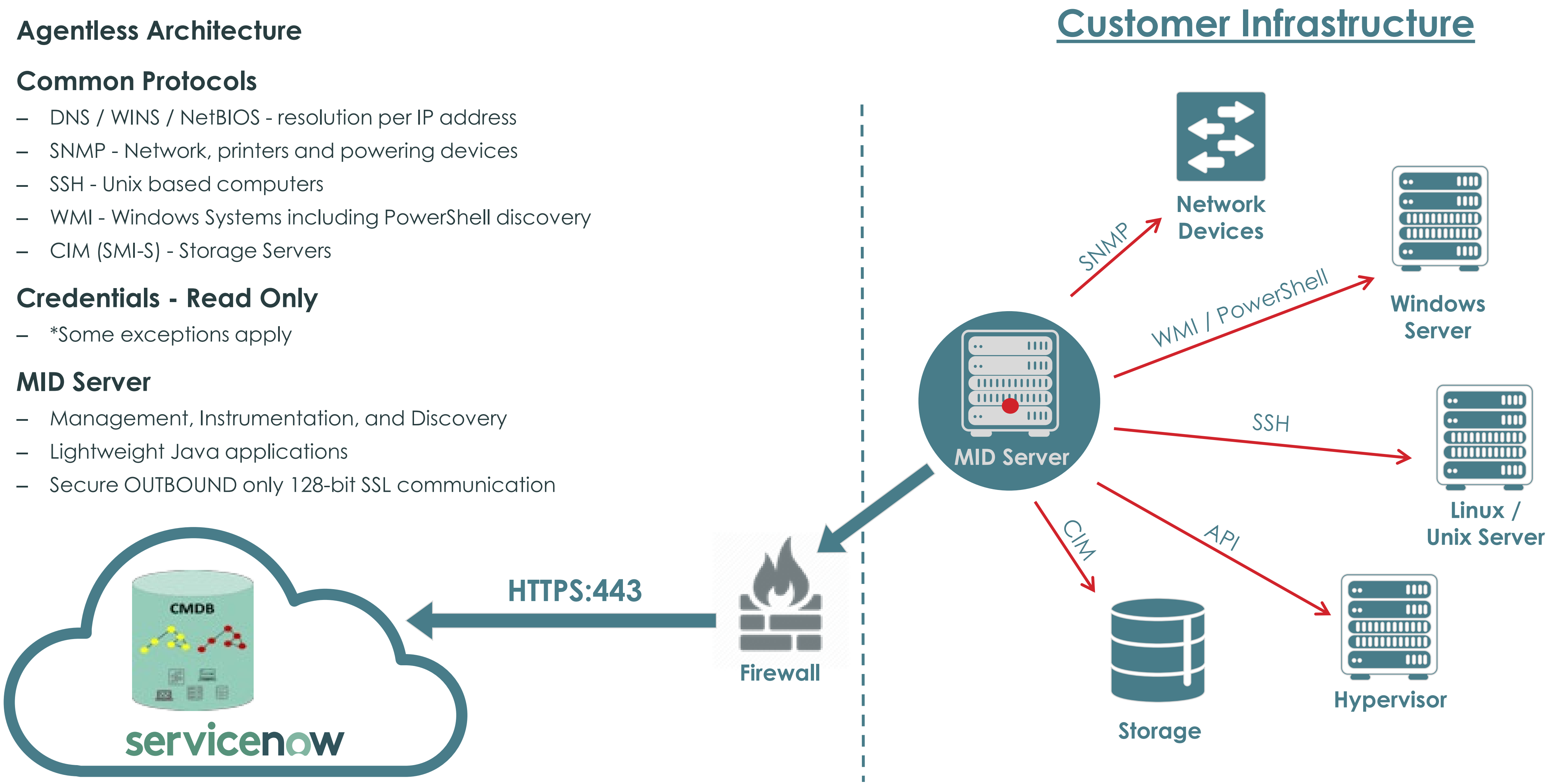
Servers

Service Mapping Provides True Business Context

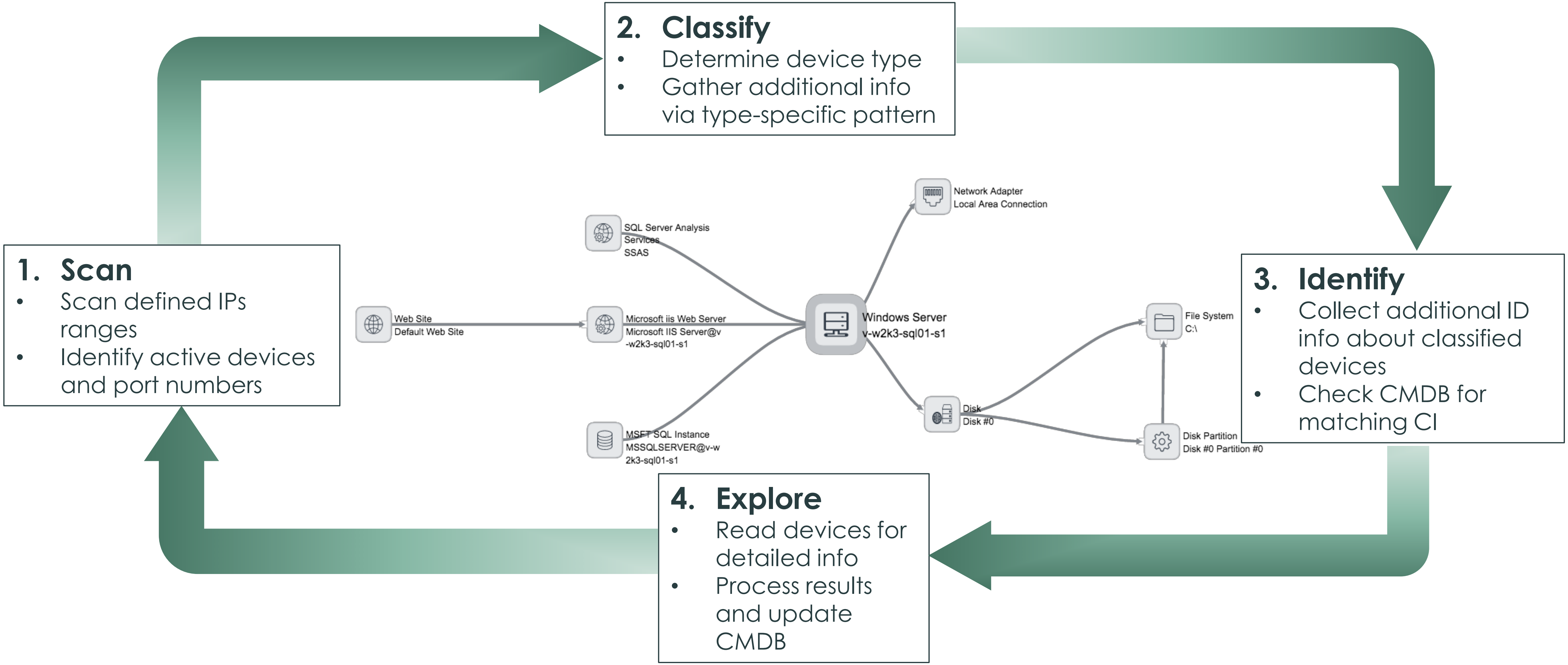


Discovery Architecture

- **Agentless Architecture**
- **Common Protocols**
  - DNS / WINS / NetBIOS - resolution per IP address
  - SNMP - Network, printers and powering devices
  - SSH - Unix based computers
  - WMI - Windows Systems including PowerShell discovery
  - CIM (SMI-S) - Storage Servers
- **Credentials - Read Only**
  - *Some exceptions apply
- **MID Server**
  - Management, Instrumentation, and Discovery
  - Lightweight Java applications
  - Secure OUTBOUND only 128-bit SSL communication



Discovery Process



1. **Scan**
   - Scan defined IPs ranges
   - Identify active devices and port numbers

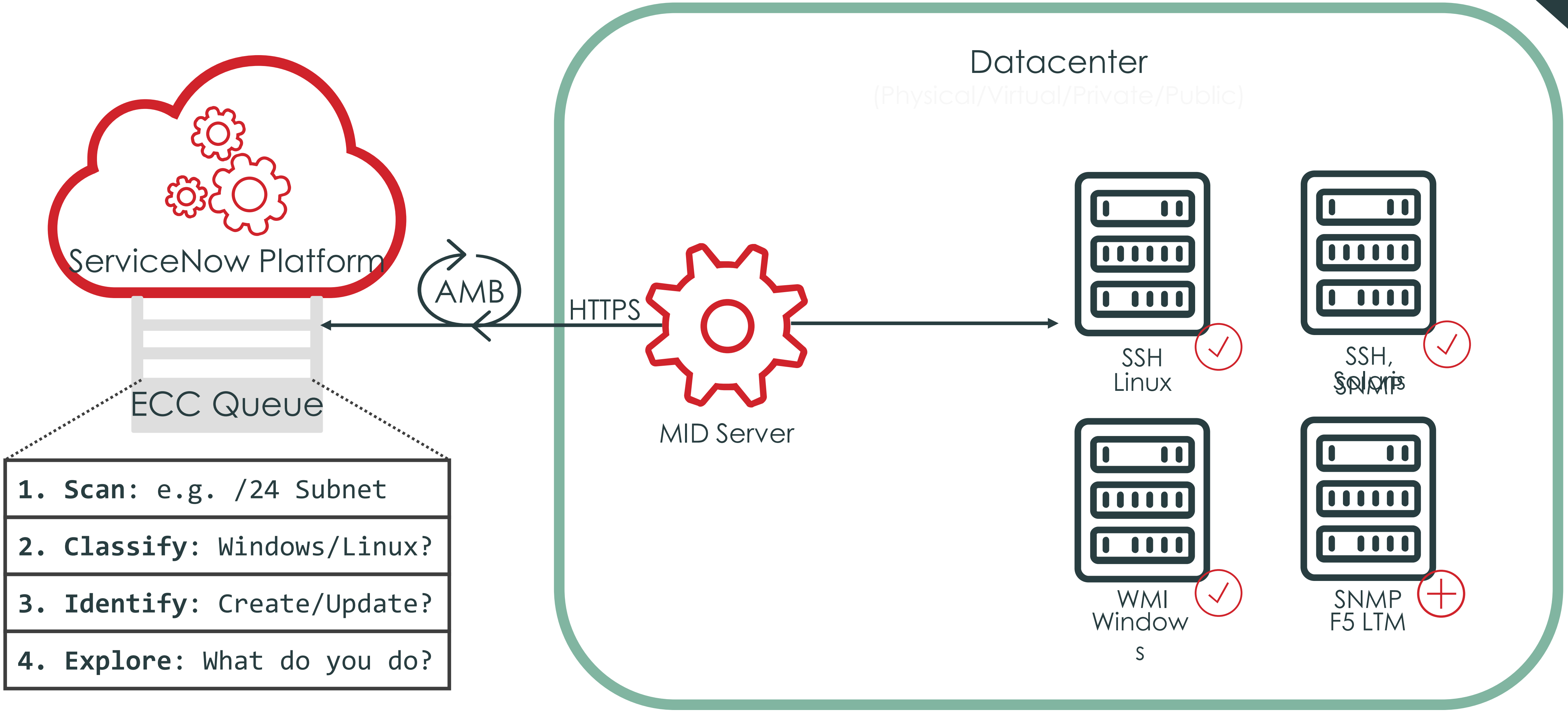
2. **Classify**
   - Determine device type
   - Gather additional info via type-specific pattern

3. **Identify**
   - Collect additional ID info about classified devices
   - Check CMDB for matching CI

4. **Explore**
   - Read devices for detailed info
   - Process results and update CMDB

Technology

Host Discovery Process



1. **Scan**: e.g. /24 Subnet

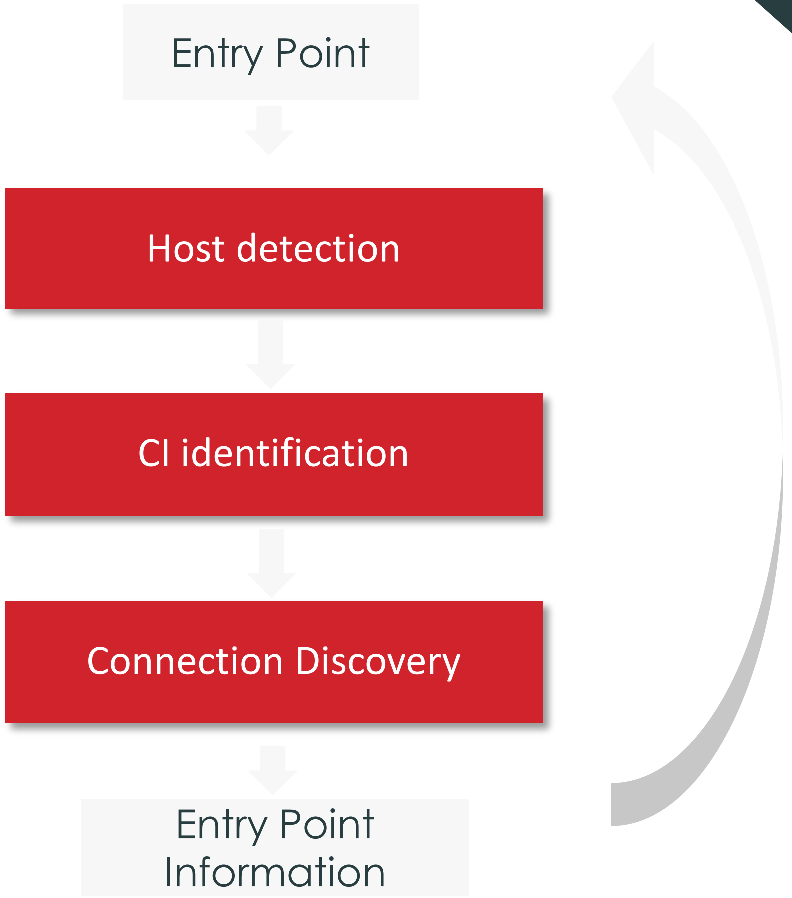
2. **Classify**: Windows/Linux?

3. **Identify**: Create/Update?

4. **Explore**: What do you do?

The Service Mapping Process

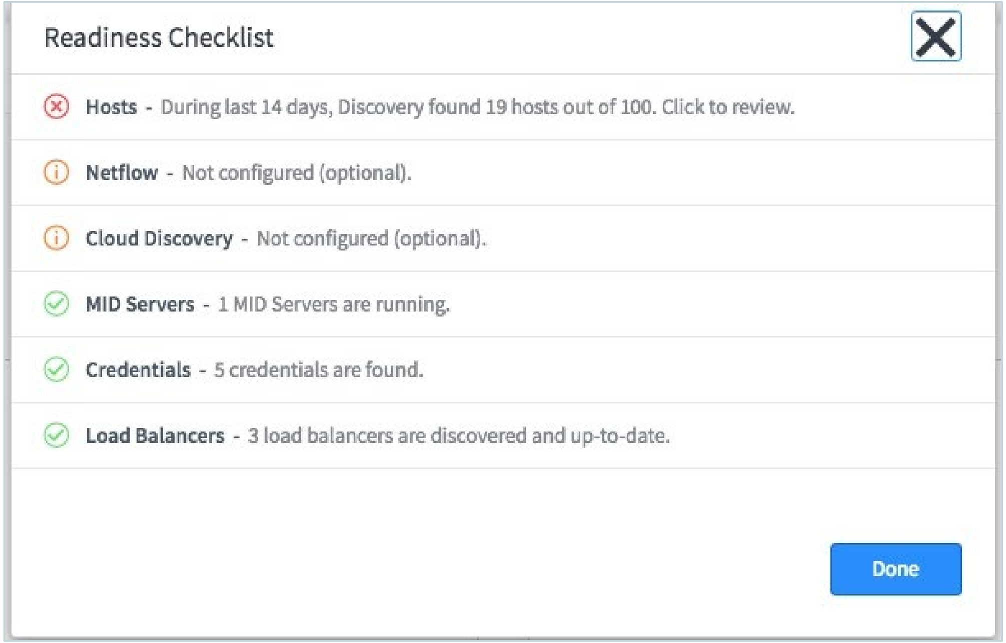
- **Entry Point**
  - URL, connection parameters, etc.
- **Host detection**
  - Connection to target machine, discovery CI information
- **CI Identification**
  - Identify the application based on information from entry point
- **Connection Discovery**
  - Discover configured connection to other applications



Technology

Readiness Checklist

- Checklist is used to:
  - Confirm that fundamental settings (such as credentials) are in place
  - Make sure that essential components (such as MID servers) are available
- If non 'optional' items are red - address first
- Not a one time checklist
  - Settings status might change
    - Ex: Revoked credentials
  - Essential components status might change
    - Ex: MID down



Readiness Checklist

☒ **Hosts** - During last 14 days, Discovery found 19 hosts out of 100. Click to review.

ⓘ **Netflow** - Not configured (optional).

ⓘ **Cloud Discovery** - Not configured (optional).

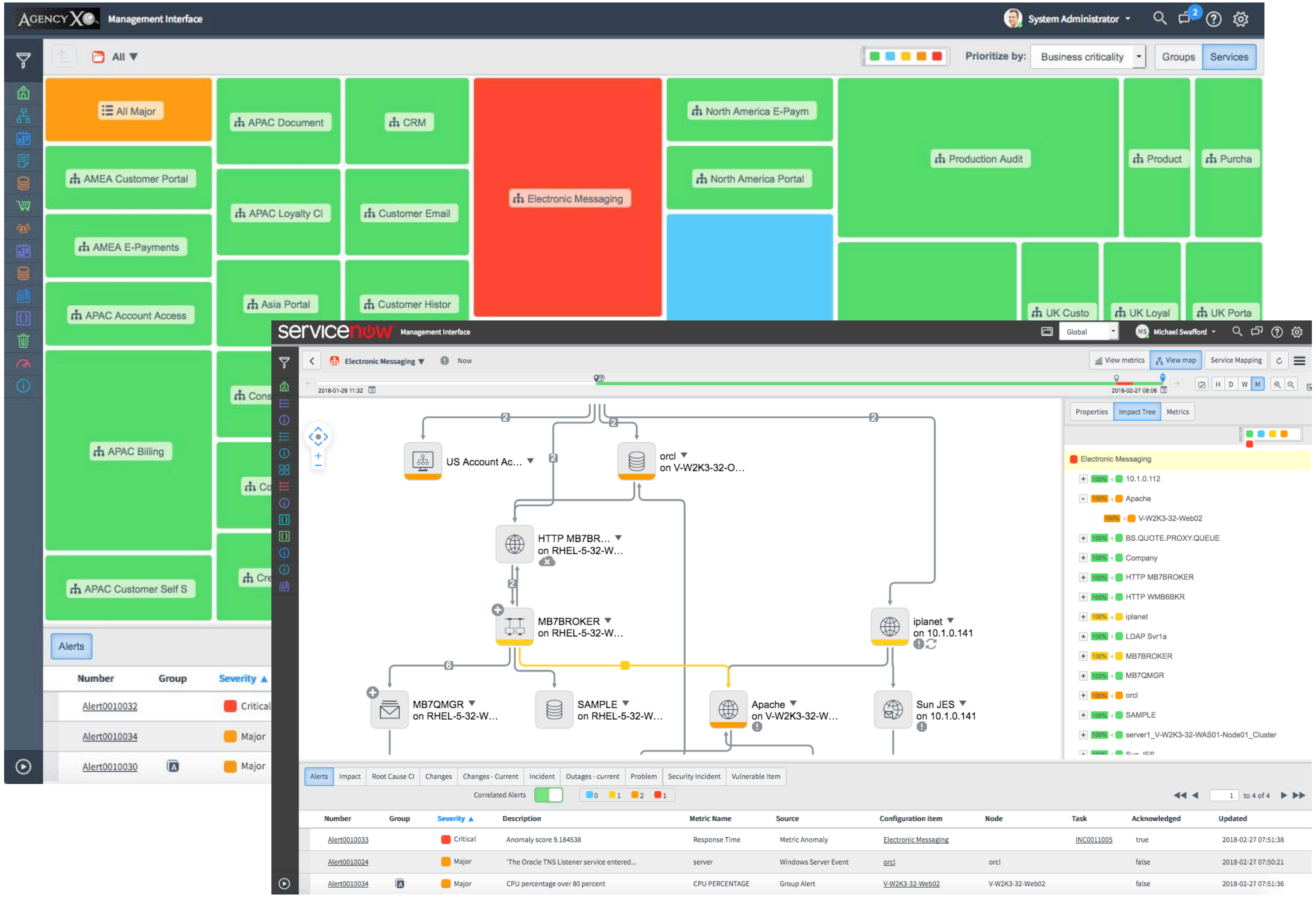
✓ **MID Servers** - 1 MID Servers are running.

✓ **Credentials** - 5 credentials are found.

✓ **Load Balancers** - 3 load balancers are discovered and up-to-date.

Event Management capabilities

- Availability dashboard
- Service health visualization
- Alert Correlation
- Predictive Alerts
- Service impact analysis
- Root Cause Analysis
- Automated & Manual Remediation



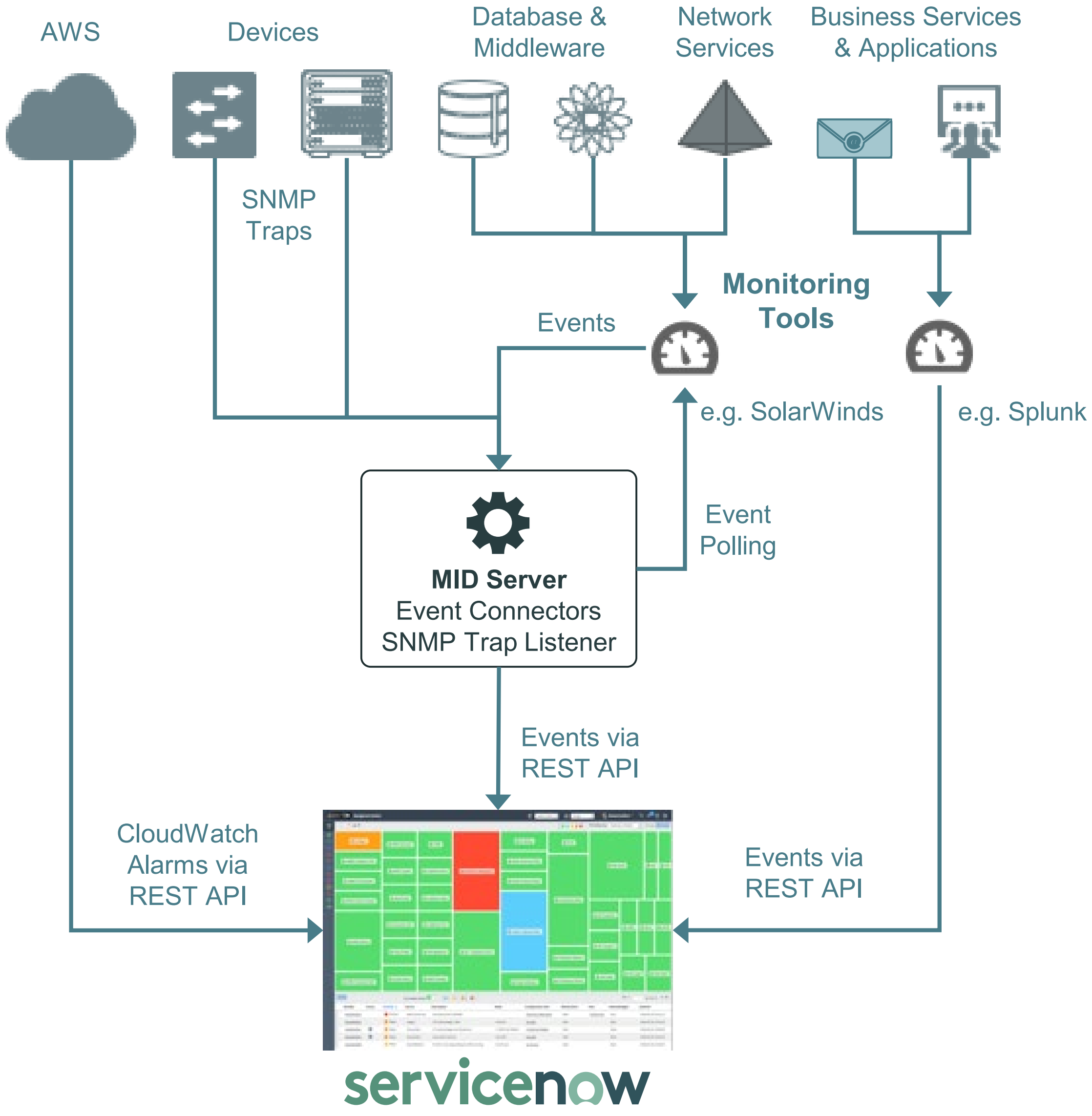
Number	Group	Severity ▲
Alert0010032		🟥 Critical
Alert0010034		🟧 Major
Alert0010030	A	🟧 Major

Number	Group	Severity ▲	Description	Metric Name	Source	Configuration item	Node	Task	Acknowledged	Updated
Alert0010033		🟥 Critical	Anomaly score 9.184538	Response Time	Metric Anomaly	Electronic Messaging		INC0011005	true	2018-02-27 07:51:38
Alert0010024		🟧 Major	'The Oracle TNS Listener service entered...	server	Windows Server Event	orcl	orcl		false	2018-02-27 07:50:21
Alert0010034	A	🟧 Major	CPU percentage over 80 percent	CPU PERCENTAGE	Group Alert	V-W2K3-32-Web02	V-W2K3-32-Web02		false	2018-02-27 07:51:36

Event Consolidation

- **Integrate existing monitoring tools & sources**
  - OOTB Connectors
    - I.E.
    - Splunk
    - SolarWinds
    - HP OM
    - Hyperic
    - IBM Netcool/OMNIbus
    - Microsoft SCOM
    - VMware vRealize
    - And More…
  - SNMP Traps
  - REST API
  - Amazon CloudWatch
  - Email
- **Benefits**
  - Flexible integration methods
  - Rapid connection of event sources
  - Transform events from sources into consistent format
  - Speed time to resolve problems
  - Manage all alerts in one console

IT Infrastructure and Applications



AWS

Devices

Database & Middleware

Network Services

Business Services & Applications

SNMP Traps

Events

Monitoring Tools

e.g. SolarWinds

e.g. Splunk

MID Server
Event Connectors
SNMP Trap Listener

Event Polling

Events via REST API

CloudWatch Alarms via REST API

Events via REST API

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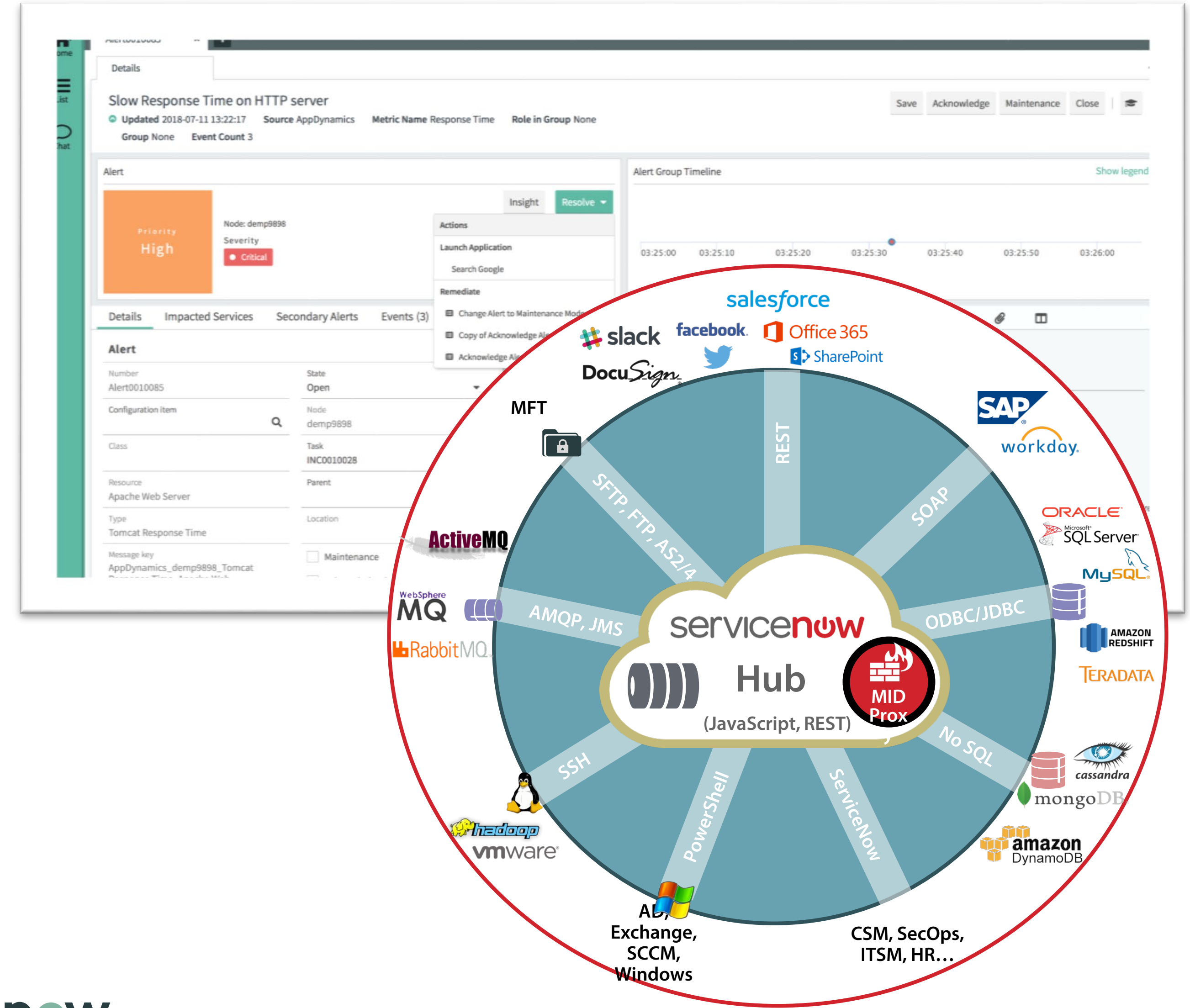
Remediate via automation



Details

Slow Response Time on HTTP server

Updated 2018-07-11 13:22:17 Source AppDynamics Metric Name Response Time Role in Group None Group None Event Count 3

Alert

Priority High

Node: demp9898

Severity ● Critical

Actions

Launch Application

Search Google

Remediate

Change Alert to Maintenance Mode

Copy of Acknowledge Ale

Acknowledge Ale

Details | Impacted Services | Secondary Alerts | Events (3)

Alert

Number: Alert0010085

State: Open

Configuration item:

Node: demp9898

Class:

Task: INC0010028

Resource: Apache Web Server

Parent:

Type: Tomcat Response Time

Location:

Message key: AppDynamics_demp9898_Tomcat

□ Maintenance

Alert Group Timeline

- Leverages ServiceNow platform Flow Designer and IntegrationHub to drive actions within and outside of ServiceNow
  - Gather further details, e.g. configuration, process info
  - Open / close Incident records
  - Restart / reset components
- Based on alert criteria, system can automatically initiate actions
- Relevant actions presented to Operator to initiate manually and observe results

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Thank You! Questions?

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