

IBM WebSphere Automation

WebSphere User Group Presentation

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WebSphere Automation



Innovation Blockers = Customer Concerns



Unprecedented convergence
of technological, social, and
regulatory forces

Time to market challenges

High operational costs

Managing complexity



That mirror our WebSphere
clients' top concerns *

Complexity of their estates

Reducing costs

Lack of cloud technology experience

* IBM WebSphere Client Survey 2020



Path to innovation is Automation

Reduce manual toil, unlock new value

AI augmentation will **recover 6.2 billion hours of worker productivity** in 2021¹

Unforeseen IT incidents and outages can cost businesses in both revenue and reputation, approximately **\$260,000/hour**²

Automation reduces the manual toil of administrative and operations efforts, minimizing the cost and complexity of managing and securing WebSphere and Liberty environments.

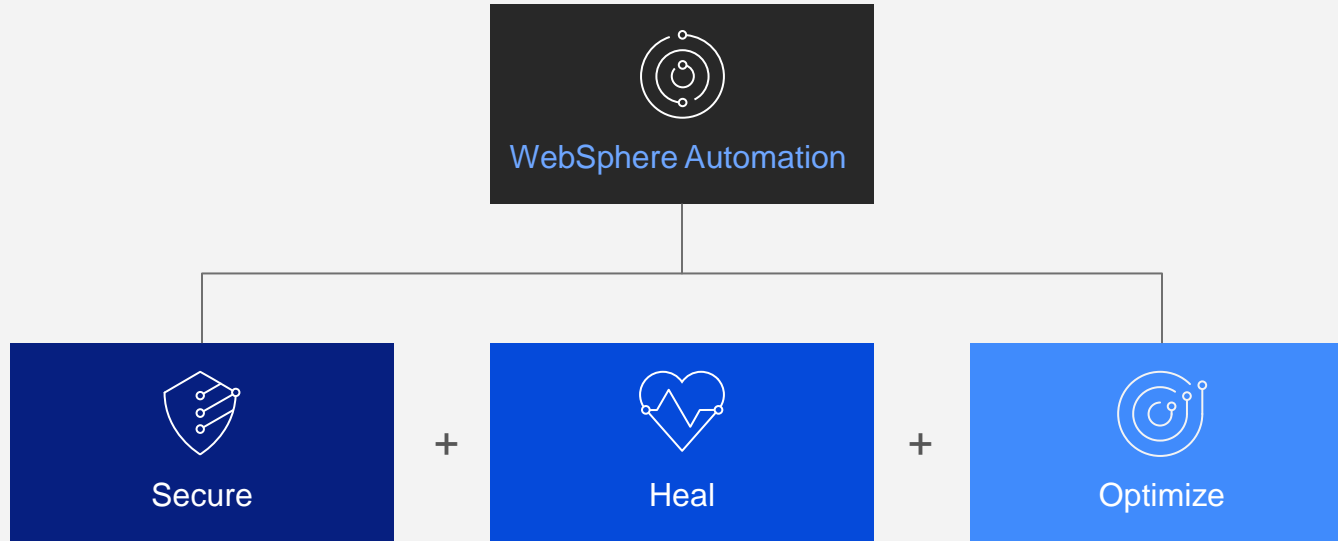
This creates the time and opportunities for higher value activities.

Agenda

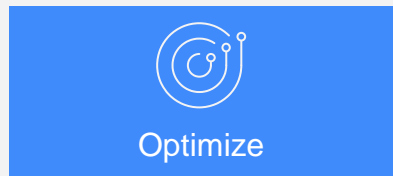
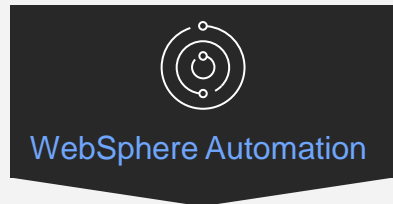
- WebSphere Automation Use Cases
- High level Architecture
 - Basic flow
- Registering WebSphere servers to WAS automation
- Architecture Diagrams
- Demo
- Roadmap



IBM WebSphere Automation

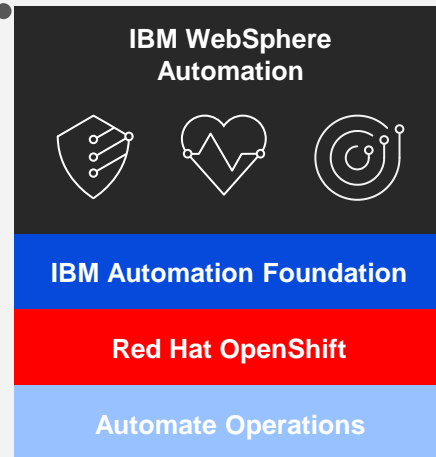
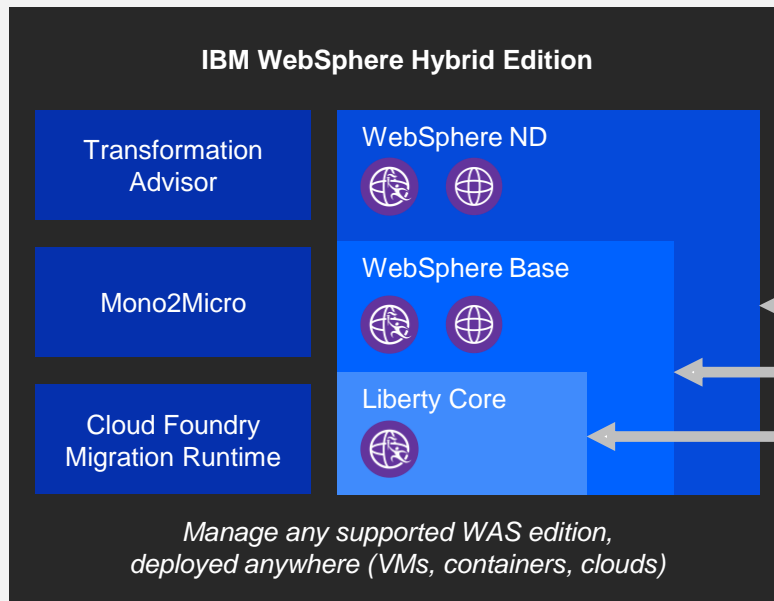


IBM WebSphere Automation



AI-infused automation for WebSphere:

- Free operations teams from routine “care and feeding” of their WebSphere environments, both traditional WAS and Liberty.
- Focus on the strategic priorities of adopting hybrid cloud and application modernization.



Add-on to existing WAS

Operations for WebSphere runtimes, both traditional WAS and Liberty, from any edition, can be automated.

WebSphere Automation

Automate WebSphere operations – **without changing your existing environment** - to quickly unlock value with increased security, resiliency and performance



Get to value quickly

Meets you where you are to deliver smaller, achievable steps towards operational efficiency and cost reduction, and *without changing your existing WebSphere or Liberty application.*



A simple step focused on Ops

Quick ROI for customers who are hampered by the complexity of their estate, the lack of cloud technology experience to keep up with rapid changes, and the constant challenge of rising costs.



Optimize WebSphere ops to refocus on business value

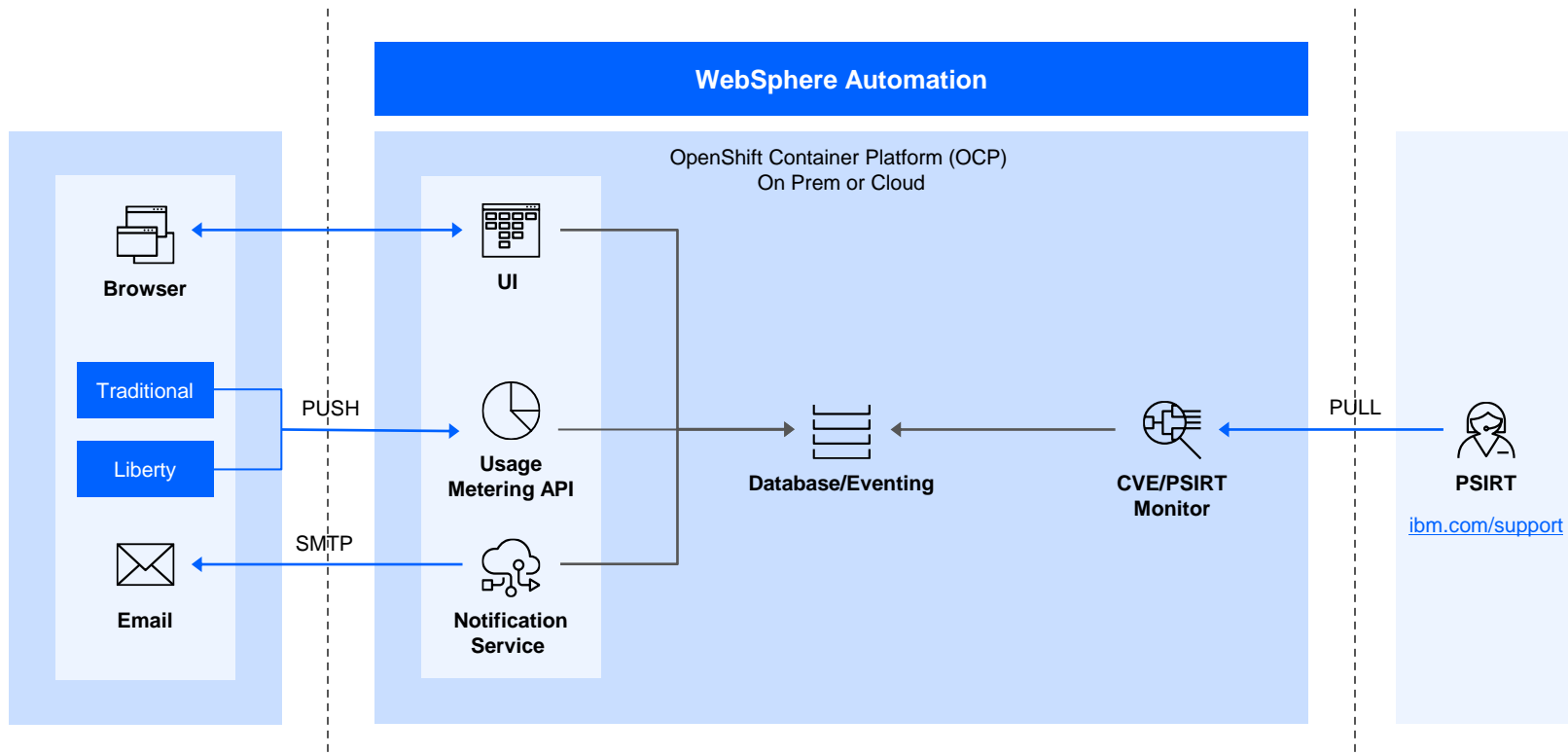
Save time and effort by automating operations and security to optimize your WAS application workloads - wherever they run, without prerequisites.

Automation Secure Use Cases

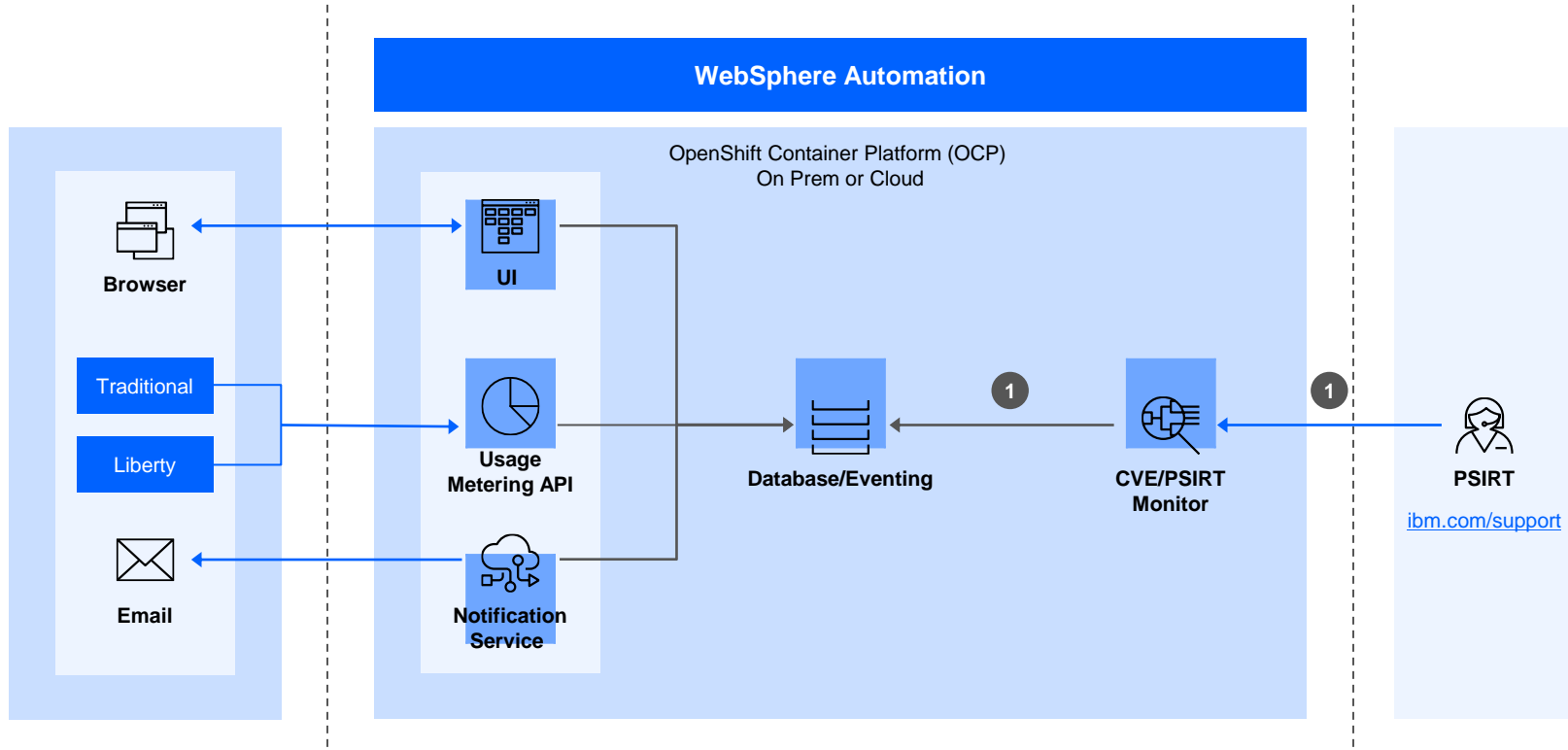
- View, from a single consolidated dashboard, all the unresolved security vulnerabilities in my WAS servers and JDKs
- **No need to manually evaluate each CVE against all my servers**
- Receive email notification when:
 - A new security vulnerability is published that affects one of my servers / JDKs
 - A server is registered that is vulnerable
- Notification identifies the specific servers affected by the vulnerability
- Register my existing servers with WebSphere Automation *without installing an apar or fix pack*



High Level Architecture

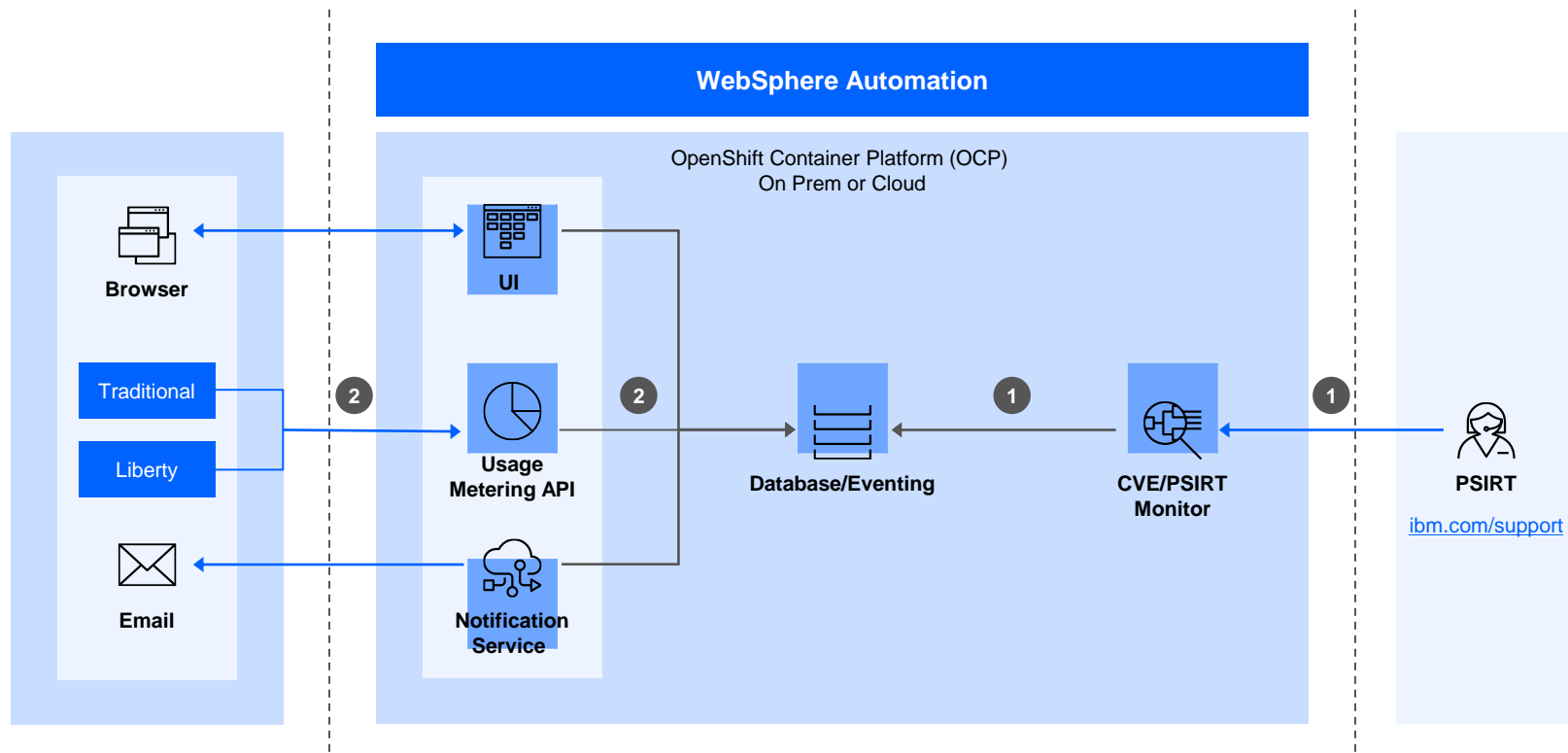


High Level Architecture



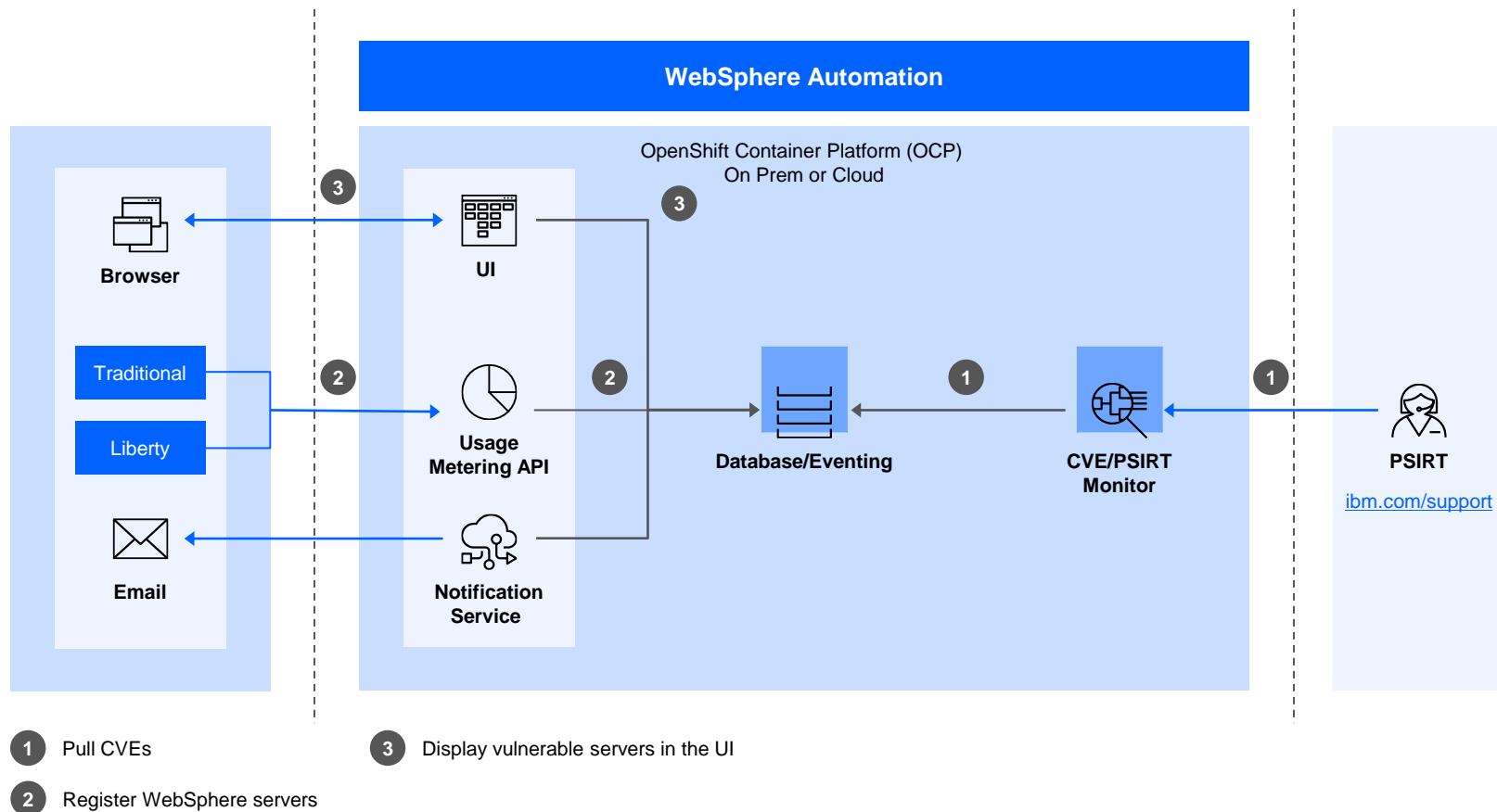
1 Pull CVEs

High Level Architecture

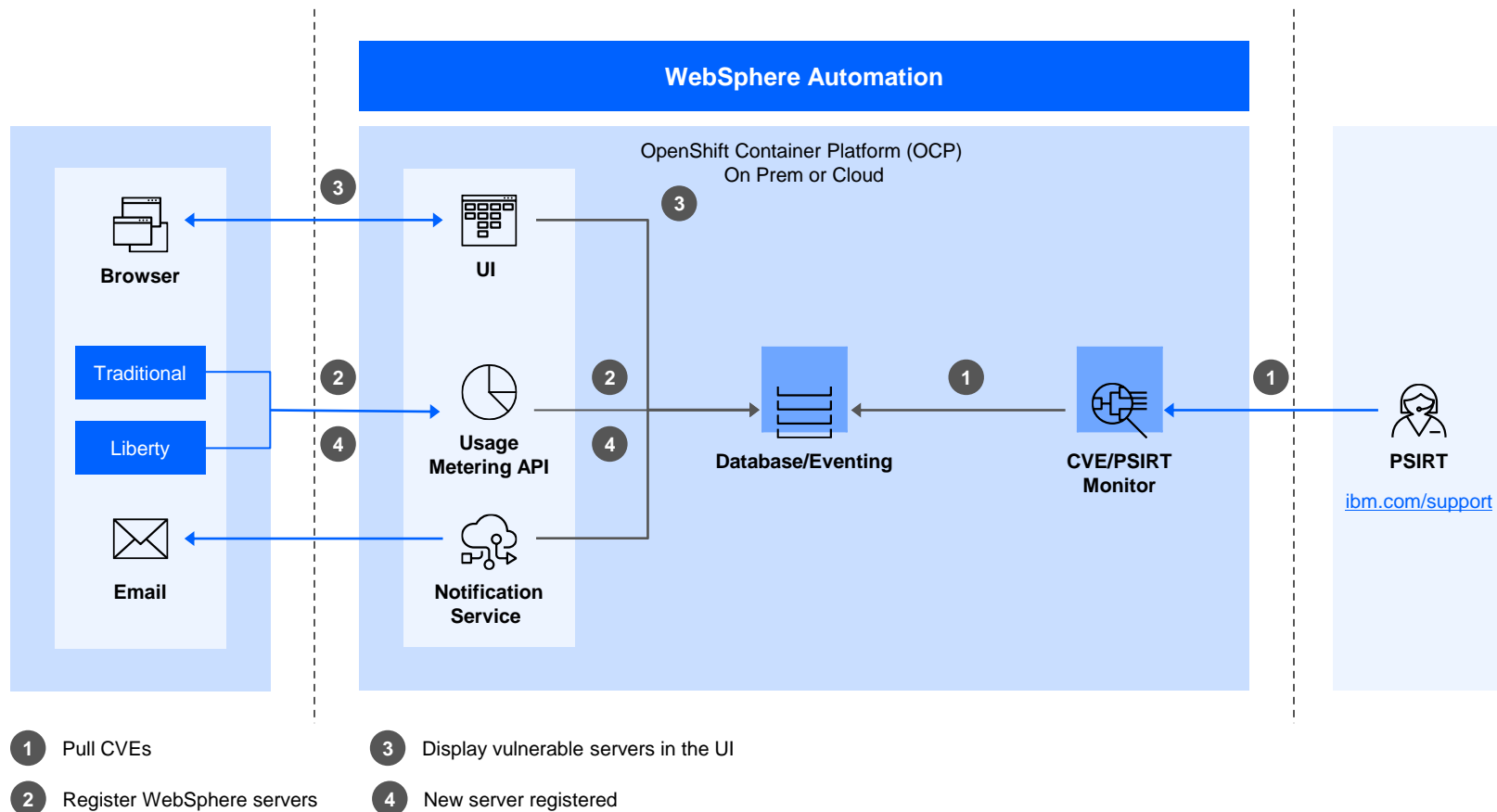


- 1 Pull CVEs
- 2 Register WebSphere servers

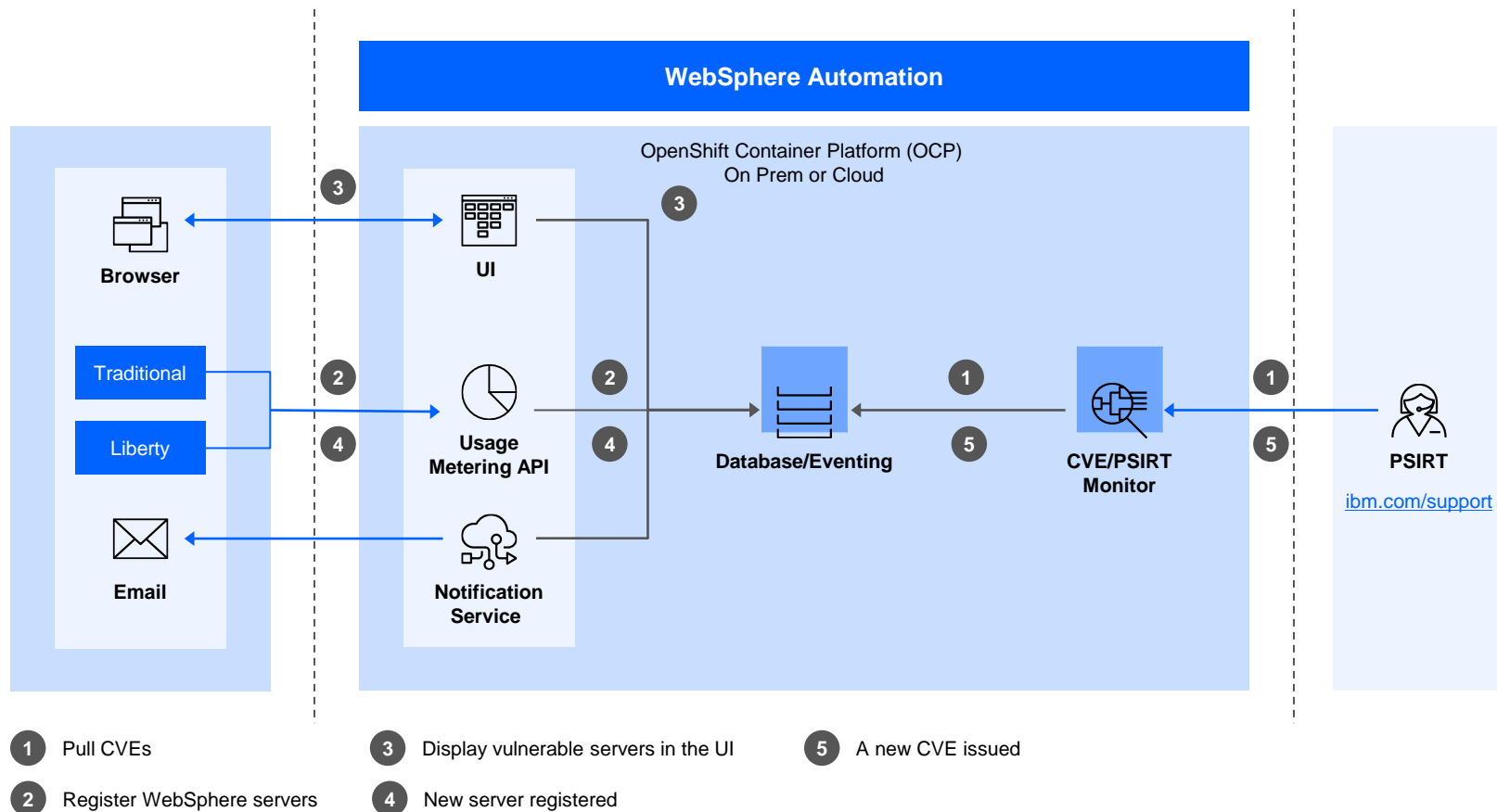
High Level Architecture



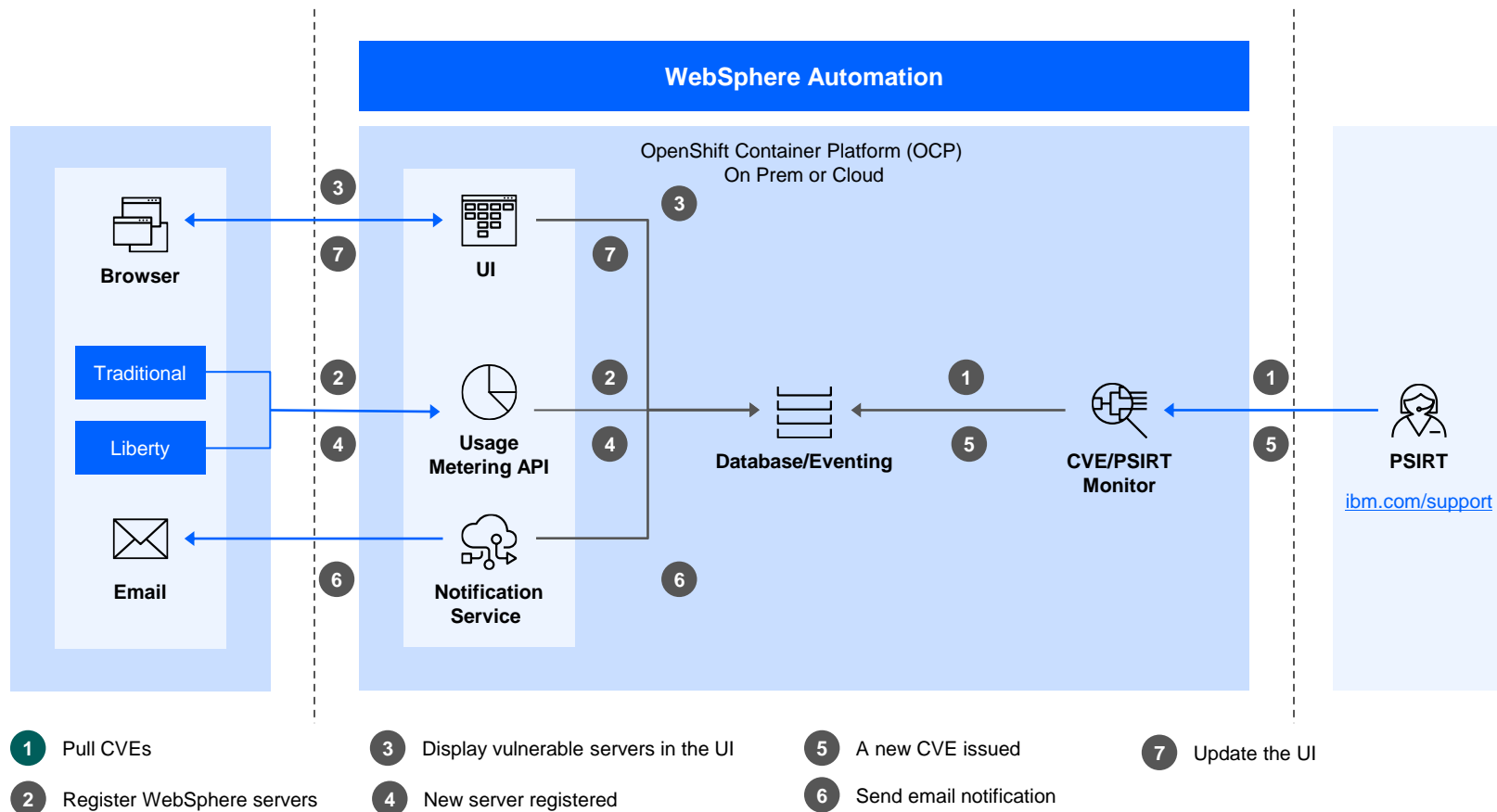
High Level Architecture



High Level Architecture



High Level Architecture



Potential enhancements (Subject to Change)

The following are a few requirements that we heard from some of our customers.

- Provide REST APIs and OpenAPI/Swagger support.
(currently provided as undocumented and subject to change)
- Provide fix pack history.
- Download iFixes / fix packs directly from the UI.
- Install iFixes / fix packs needed to close out the vulnerabilities.
- High/Medium/Low range for CVEs that can be customized.
- We will continue to gather feedback from our customers.

Registering WAS servers

[Register Liberty](#) →

[Register traditional WAS](#) →

Sample configuration in Liberty and traditional WAS



Liberty Config

Add the following to server.xml.

- `<featureManager>`
 `<feature>usageMetering-1.0</feature>`
 `</featureManager>`
- `<usageMetering url=https://api-usagemetering_service_host:port`
 `apiKey="API_key"`
 `sslRef="meteringSSL"/>`



Traditional WAS Config

Add was-usage-metering.properties that contains the following.

- `url=="https://api-usagemetering_service_host:port"`
- `apiKey=<API key>`
- `sslref= meteringSSL`

Sync the config changes

Steps needed to register

Obtain the WebSphere Automation registration URL and API-KEY

- Provided as part of WebSphere Automation install

Configure Usage Metering with URL and API-KEY

- Add a feature in Liberty in <featureManager>
- Add a properties file in traditional WAS

Setup TLS for HTTPS

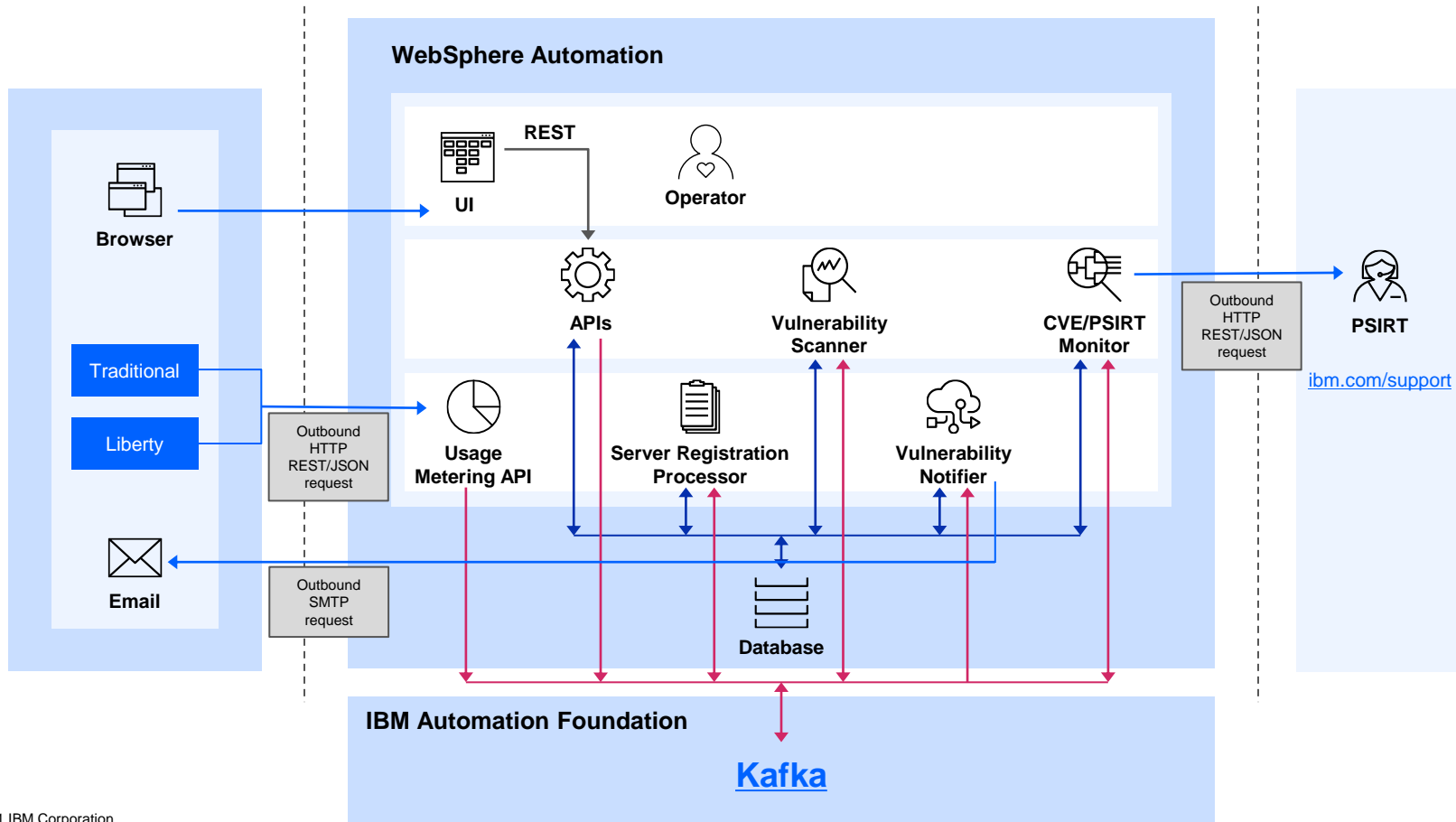
- Import the signer certificate to the trustStore.

Start the server

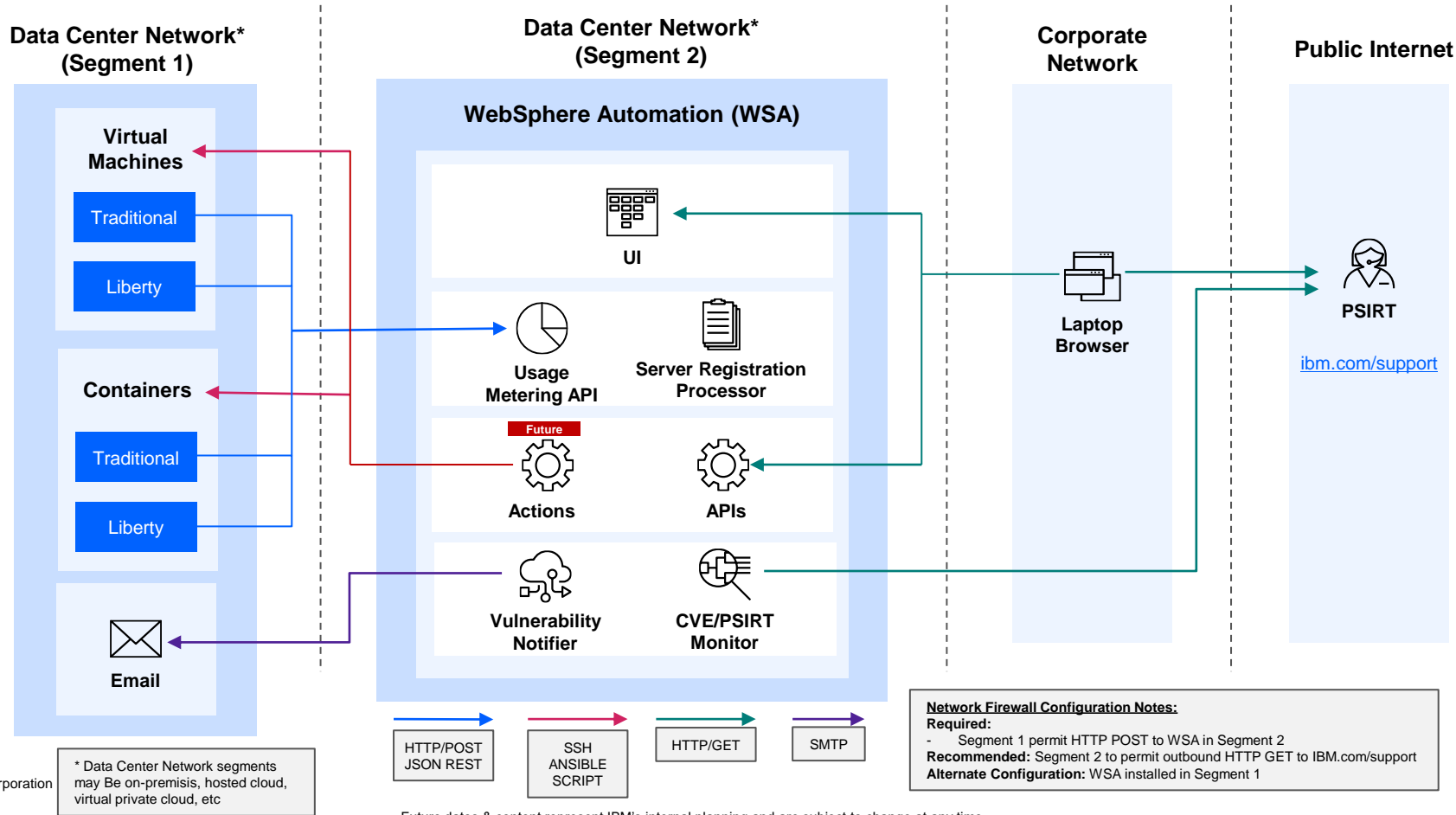


Architecture Diagrams

Detailed Product Architecture

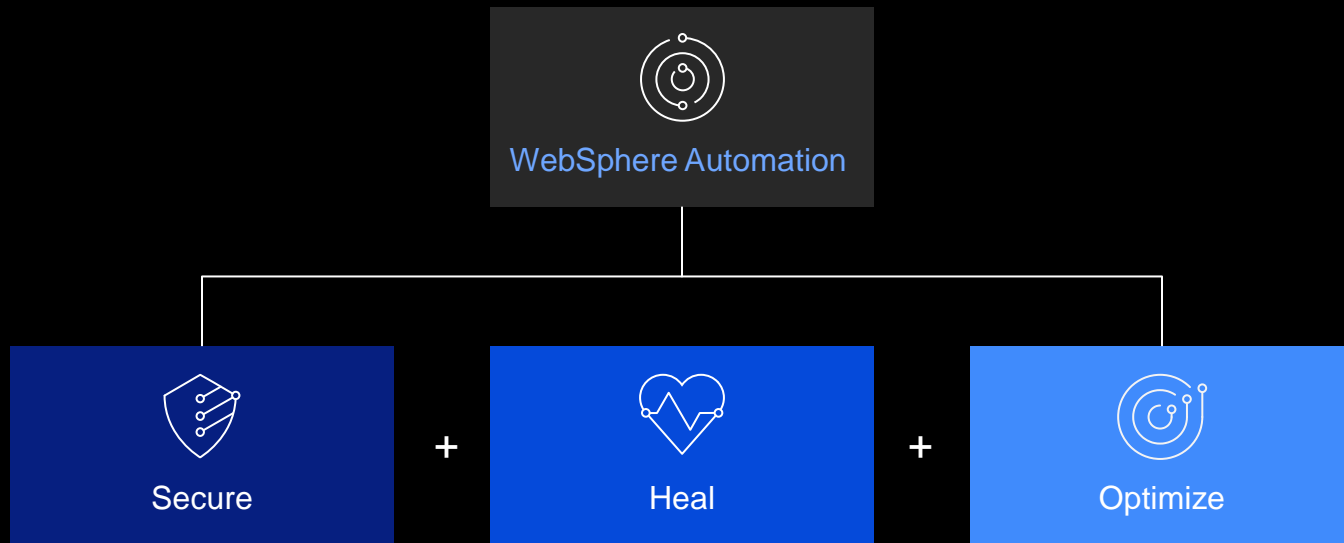


Implementation Reference Architecture



DEMO!

IBM WebSphere Automation Vision



Anticipated Delivery Roadmap



WebSphere Vulnerability Tracking

Automated tracking and notification of new security vulnerabilities (PSIRT)



Single dashboard for your entire WebSphere estate

Consolidated dashboard increases awareness and response time to security vulnerabilities

Initial Release, 2Q'21



Vulnerability remediation

Schedule roll out of fixes and patches for vulnerabilities and issues as best for your enterprise



Assisted problem determination

Assisted feedback and guidance on problem determination and resolution to achieve faster time to recovery



Automated tuning advice

Discover optimal tuning configuration for production workloads without dedicated tuning environments or deep technical skills

Continuous Delivery, Potential Future Content

Currently In Development



Secure



See & Act on

Web Scanner

- WebScanner for new and existing applications

Patch history

01 Jan 2021	CVE released/affected	
	Unresolved CVE	Risk level
	CVE-2020-14797	High (7.1)
31 Dec 2020	ifix applied	
	IFix	Risk level
	PI80315	None (0)
20 Dec 2020	ifix applied	
	IFix	Risk level
	PI80314	None (0)
19 Dec 2020	CVE released/affected	
	Relevant CVE(s)	Risk level
	0441455-WAS-FP-13	High (7.1)



Heal



Automatic Memory

Leak Detection & Analysis

- Automatic memory detection and analysis
- Get problem details and share with experts to take corrective action

Investigation history

10 May 2021, 3:12 pm	Analysis complete
10 May 2021, 3:05 pm	Analyzing
10 May 2021, 3:02 pm	Collecting diagnostics
10 May 2021, 3:00 pm	Memory leak detected

+ Up Next



Secure



Automate Security Patch Roll-out

- Pre-download patches (iFixes and Fix Packs) to your staging server
- Script deployments with Ansible (and hook into custom scripts (tbd))



Join the WebSphere and Integration CAB

A Customer Advisory Board that helps you connect with experts.

Let's continue our conversation.
No change to WAS CAB members.
Anyone can join.

- ✓ Join weekly (optional) sessions
- ✓ Connect directly with experts
- ✓ Share pain points and best practices
- ✓ Provide feedback
- ✓ Be the first to review roadmaps
- ✓ Get insights from peers
- ✓ Access to opportunities

Register → <http://ibm.biz/WebSphereandIntegrationCAB>

Contact: claudiab@us.ibm.com

