



**A Smarter App Monitoring Solution to Deliver One Fantastic User Experience: Synthetic, Real-User, and Transaction Tracing Integrated in One Solution**  
**April 5, 2016**

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# Hosted By



Rocky Pisto  
Chapter/SIG Leader



# Today's Speakers



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Hewlett Packard Enterprise



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Hewlett Packard Enterprise



# Housekeeping

- This “LIVE” session is being recorded  
Recordings are available to all Vivit members
- Session Q&A:  
Please type questions in the Questions Pane



# Webinar Control Panel

Toggle View Window between Full screen/window mode.

Questions





# Polling Question #1



**Hewlett Packard  
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# HPE AppPulse

A smarter app monitoring solution to  
deliver one fantastic user experience





**The user experience is like a road trip.**

**It's not about the destination...**

**It's the journey.**



# It pays to keep their journey smooth.



When the UX is a delight,  
users love you.



## A superb user experience gets you:

- Happy customers, great reviews.
- Increased sales.
- Reduced support costs.
- Good karma.



When something goes  
wrong, there's hell to pay.



## Cost of application downtime:<sup>1</sup>

**\$336K/h**

—Gartner

**\$500/h**

for critical failures  
—IDC

**\$100M/y**

—Infogenics<sup>2</sup>

# If UX is the new SLA—What defines it?

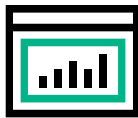
Does your app fulfill all of these user expectations?



# UX: Who needs what?



**IT Ops:**  
“I want to find and fix app issues before my users do.”



**Business:**  
“I have to achieve a 5-star rating for my mobile app.”



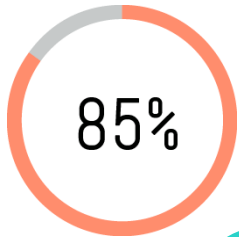
**DevOps:**  
“I need visibility to the root cause from user action to the line of code”



# UX is the new focal point for DevOps

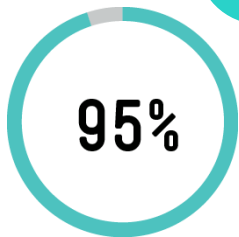
“You’re not doing DevOps if you’re not focused on the customer experience.”

Gartner

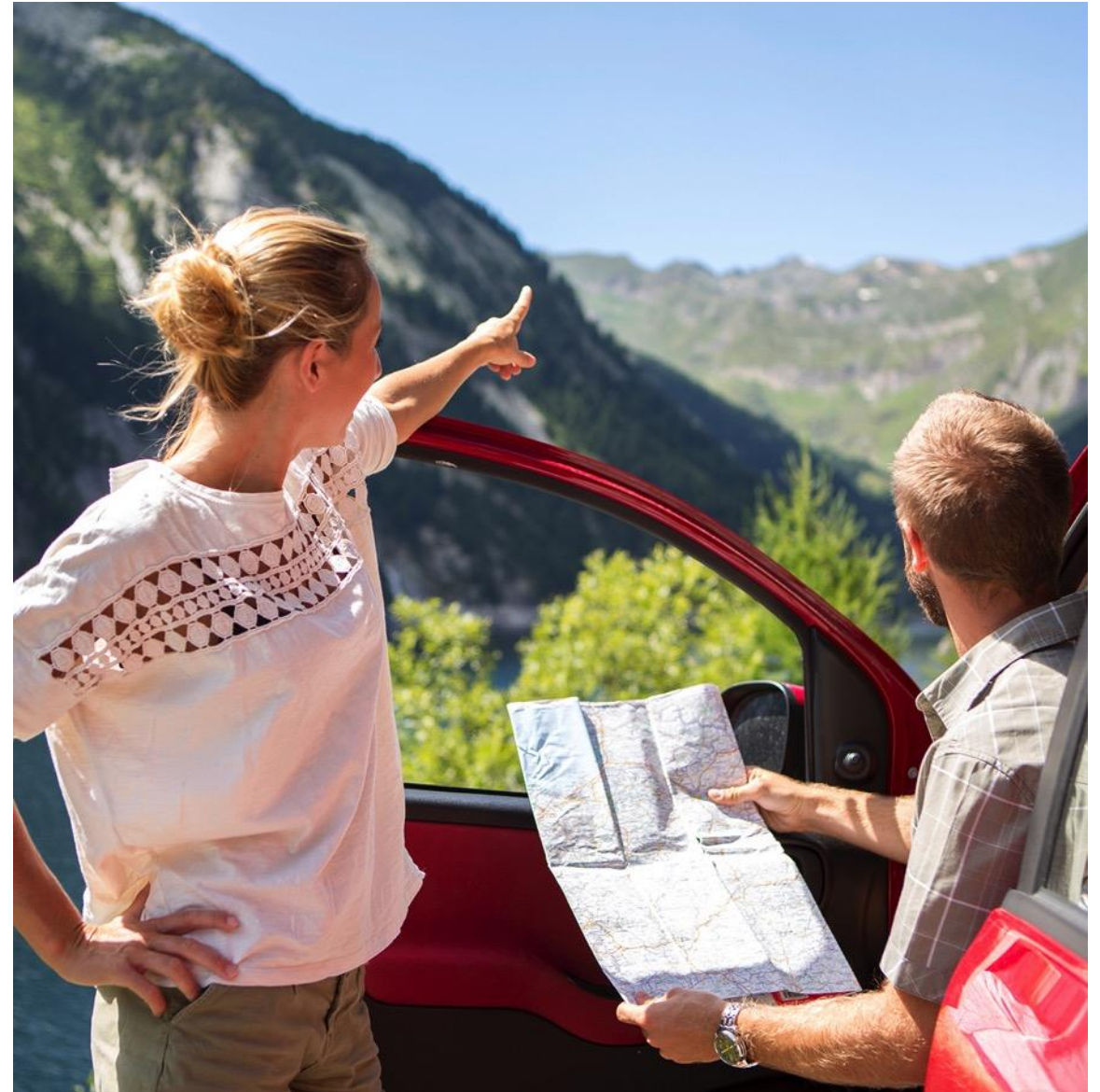


of developers say they understand the importance of the user experience.

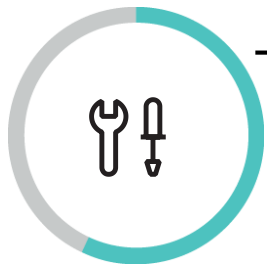
and...



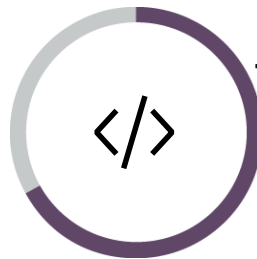
of *mature* DevOps teams focus on the user experience.



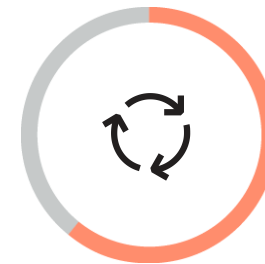
# ...But DevOps doesn't have the right tools



— **57%** of DevOps teams lack Application Performance Monitoring (APM) tools featuring user experience dashboards



— **67%** have no insight into the line of code that caused an error, slow performance or a crash.

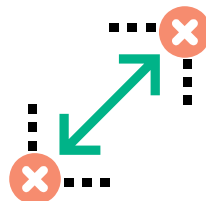


— **61%** of developers are blind to the end-to-end process of monitoring the user experience.

# ...But DevOps doesn't have the right tools



Core products that don't cooperate.



Limited in their functionality.



No drill-down to the root cause of problems.



# Polling Question #2



# Delivering a delightful UX: what's required?



Synthetic monitoring



Real user monitoring



Transaction monitoring  
and diagnostics

# Introducing a smarter solution

IT Ops



*Let's revisit  
our 3 UX  
professionals*

*The  
capability  
they need:*

Emulate user  
actions and devices;  
uphold SLAs



*The product  
that will get  
them there:*

**HPE AppPulse Active**

Business



Measure everything  
impacting user experience



**HPE AppPulse Mobile**

DevOps



Trace user  
transactions down to  
line of code

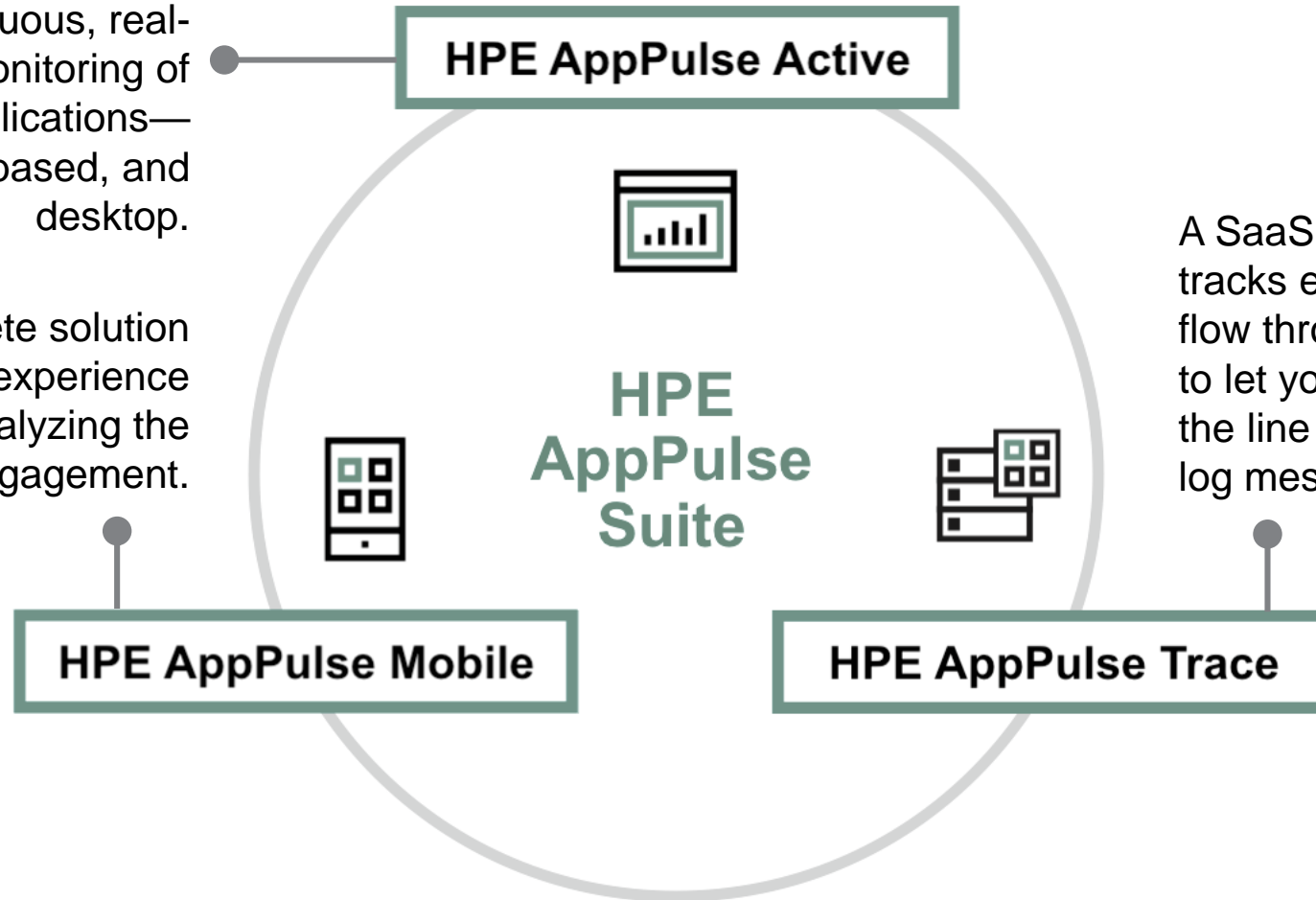


**HPE AppPulse Trace**

# Introducing a smarter solution

Proactive, continuous, real-time synthetic monitoring of ALL your applications—mobile, web-based, and desktop.

The first complete solution for measuring the user experience of mobile apps and analyzing the business impact of user engagement.



A SaaS APM solution that tracks end-to-end transaction flow through all service tiers, to let you isolate problems to the line of code or the specific log message.

# HPE AppPulse Active: Get proactive.

- **Visibility** into all your apps
- **Synthetic monitoring** to proactively see and fix issues
- **Isolation** by application, location, transaction, or component layer
- **Single pane of glass** for easy monitoring
- **Easy installation** in about 5 minutes
- **Integration** with trusted DevOps tools
- **Collaboration** among development, QA, and operations teams



# HPE AppPulse Mobile: Measure what matters most



## Performance

- Launch time
- UI response time



## Resource usage

- Battery drain
- Data usage



## Stability

- Crashes
- Errors

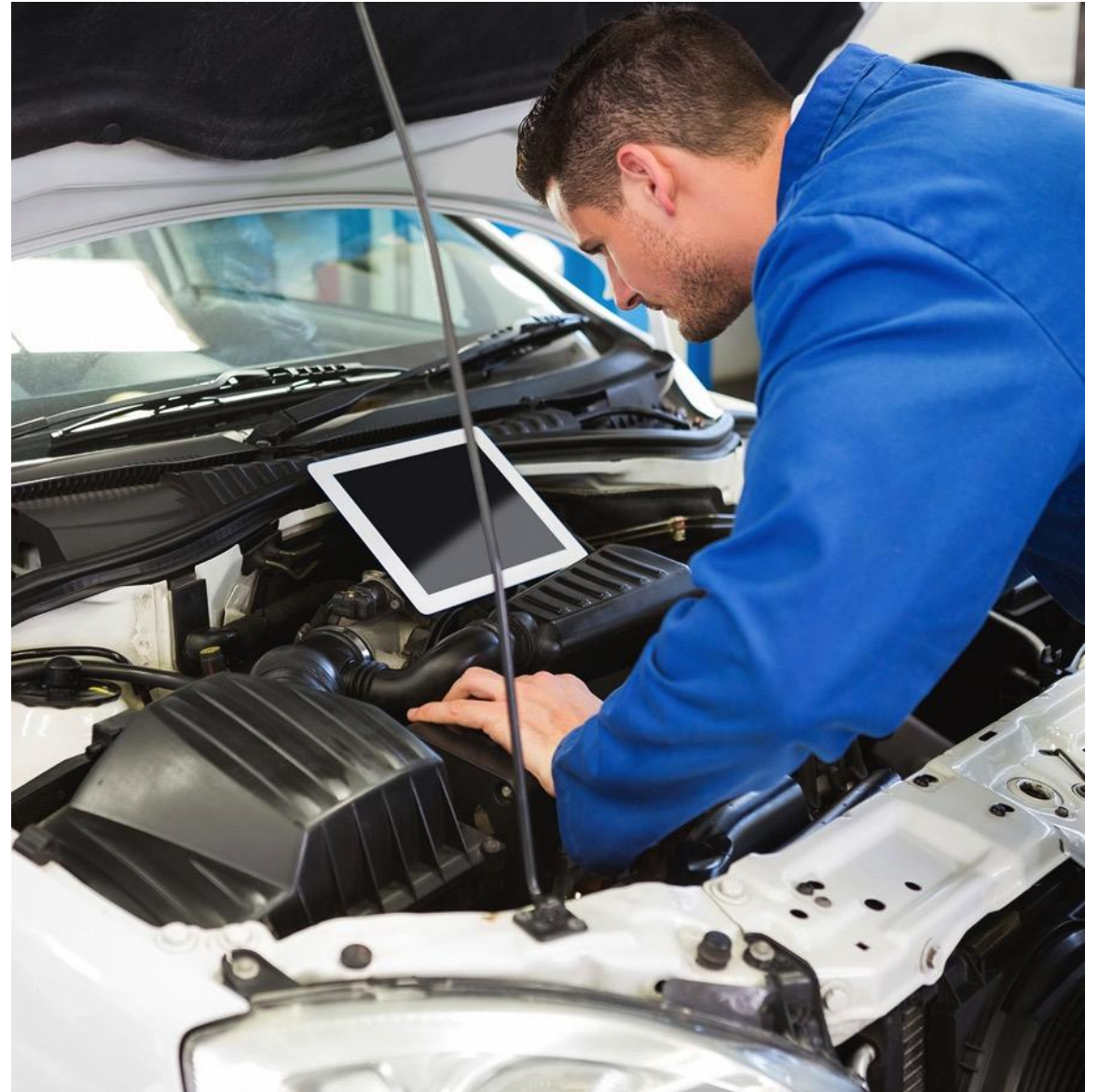


## User flows

- Follow user interactions, screen by screen

# HPE AppPulse Trace: Isolate and fix transaction issues

- **Smart user-server correlation** – correlation of UX issues with server-side problems
- **Integrated web user monitoring** – monitor UX from real user browsers
- **Trace 360** – trace all aspects of transaction execution
- **Transaction log tracing** – deliver correlated view of log message

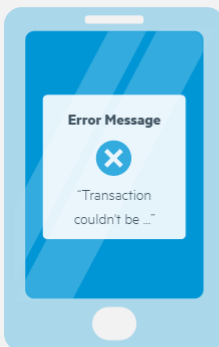


# HPE AppPulse Suite Synergies

AppPulse MOBILE Money Transfer | Tap the Transfer button Submit Defect Share View Error List

#1 Failed Action Apr 04, 09:27 3.3 App Version 5.0.1 OS LG Nexus 5 Device

ERROR DETAILS



Error Message  
"Transaction couldn't be completed. Internal server error"

Failed HTTP requests  
HTTP response code 500:  
http://amb.hpswdemportal.com/Advantage/Customer/FraudPrevention  
[Trace Server Error](#)

HPE AppPulse Trace isolates the root cause of the HTTP request failure

HPE AppPulse Mobile error report detects failed HTTP Request

AppPulse TRACE Transaction: GET /Advantage/Customer/FraudPrevention Go to Transaction Over Time

Apr 4, 2016 9:27:36 AM 2219ms Server Time 1 Exceptions 500 HTTP Status

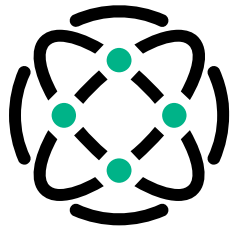
Transaction Timeline

Operations Flow

| OPERATION NAME  | SELF TIME (ms) | TOTAL TIME (ms) | TOTAL CONTRIBUTION (%) |
|---|----------------|-----------------|------------------------|
| /Advantage/Customer/FraudPrevention                                   | 611            | 2219            |                        |
| SQL query to database from SQLServerPreparedStatement.executeO method | 1002           | 1002            |                        |
| /FraudCheckService/FraudAssessment (not traced)                       | 606            | 606             |                        |

---

# The AppPulse difference: Synergies



**End-to-end visibility**



**Reduced triage times**



**Continuous improvement**





# Polling Question #3

# Example: Advantage Online Banking

## Web

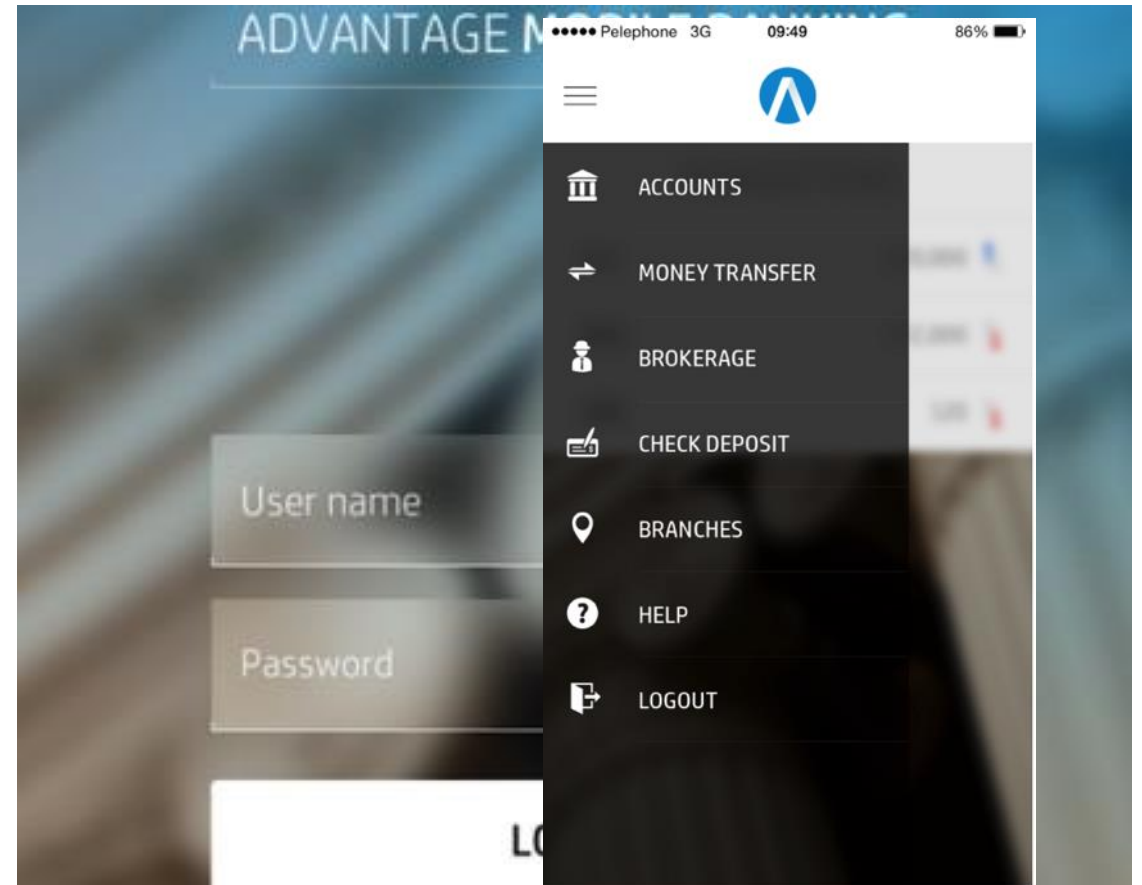
The screenshot shows a web browser window with the URL `5.60.179.84:47001/advantage/customer/transfermoney.jsp`. The page header features the Advantage Online Banking logo and a personalized greeting: "Welcome Milin Jojo! Your last lo". The main content area is titled "MONEY TRANSFER" and contains the following information:

Please enter amount and date of transfer

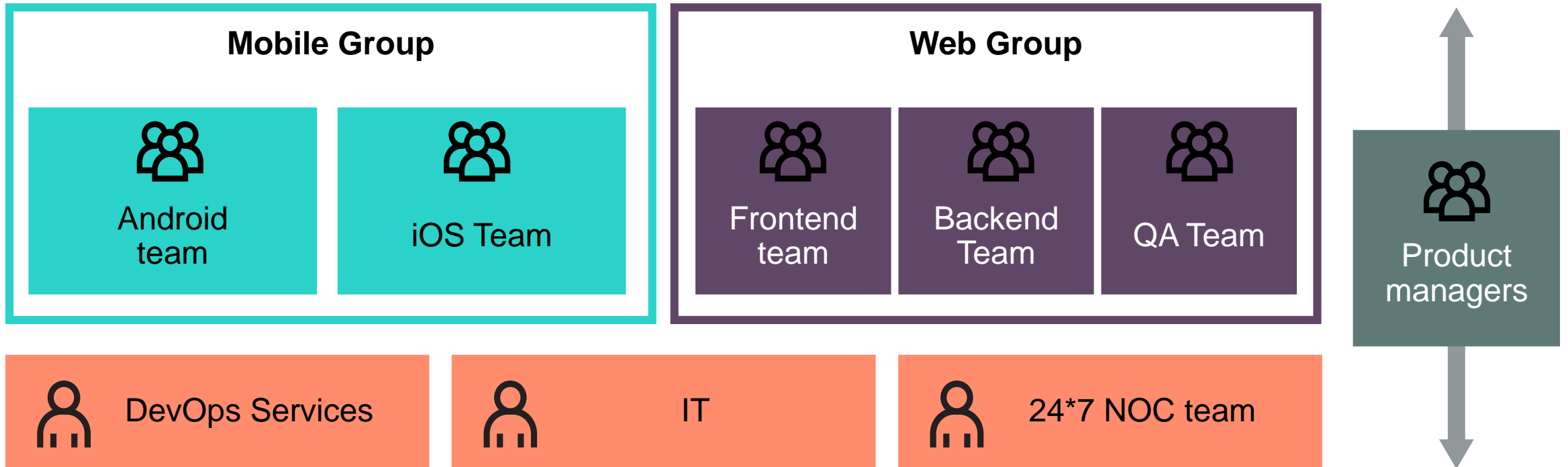
|               |   |            |
|---------------|---|------------|
| From Account: | Checking [xxxxxxx875]                   | \$1,570.24 |
| Available:    |   | \$1,570.24 |
| To Account:   | Savings [xxxxxxx876]                    | \$162.26   |
| Available:    |   | \$162.26   |
| Amount:       | <input type="text" value="500"/>        |            |
| Date:         | <input type="text" value="02/08/2016"/> |            |

A "Next" button is located at the bottom right of the form. The footer of the page reads "© Advantage Inc, 2010".

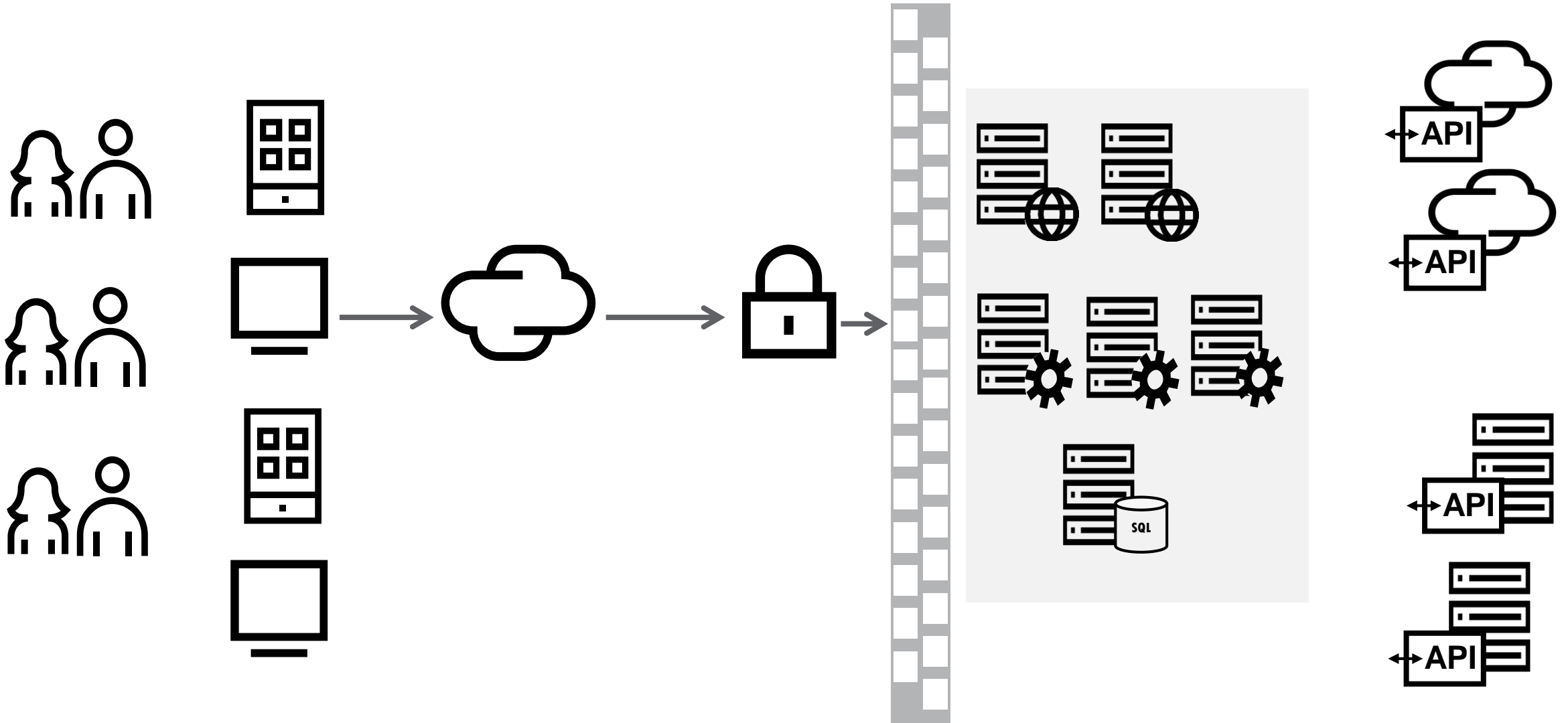
## Mobile Apps



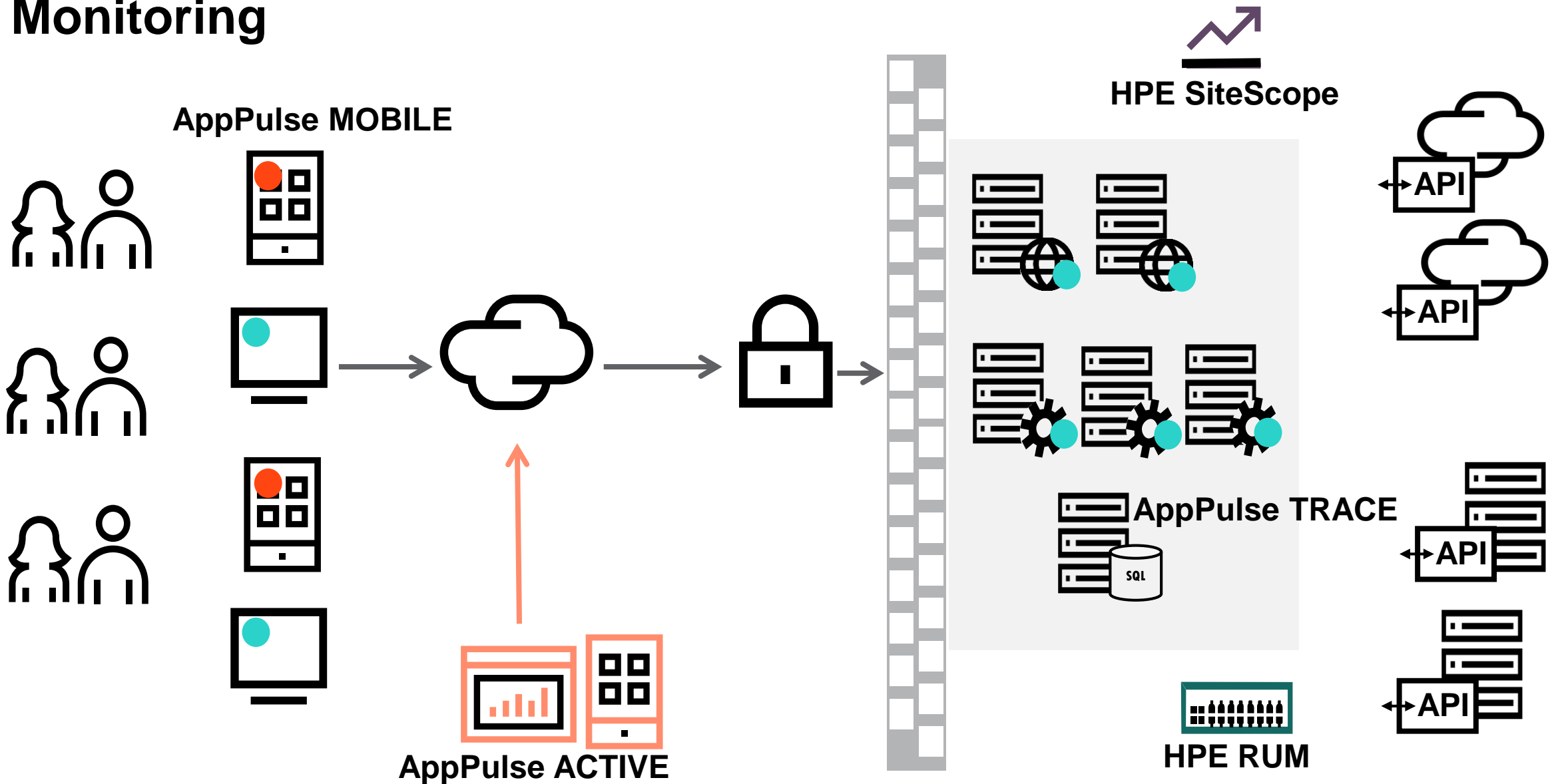
# Advantage Online Banking Engineering



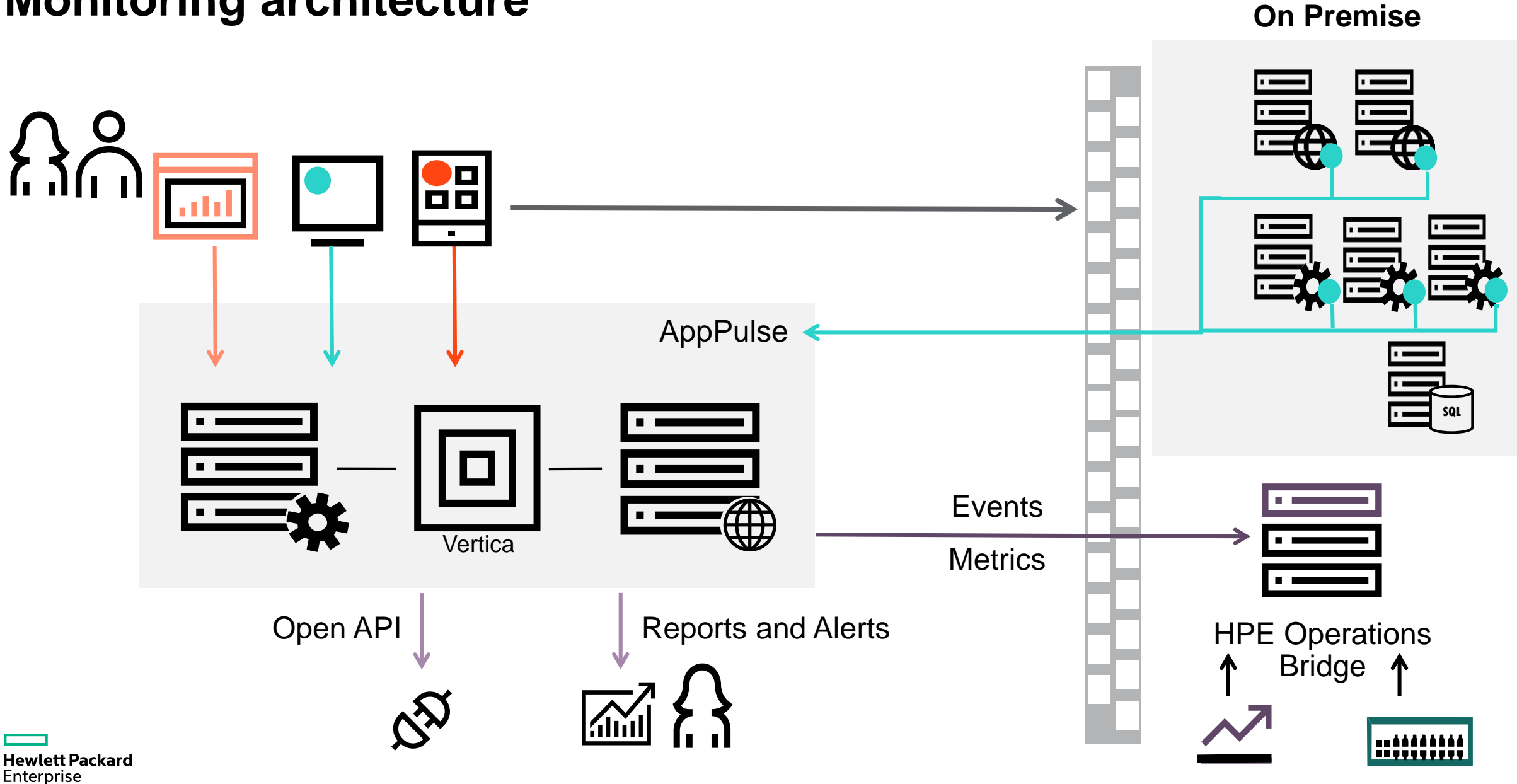
# Advantage online banking



# Monitoring

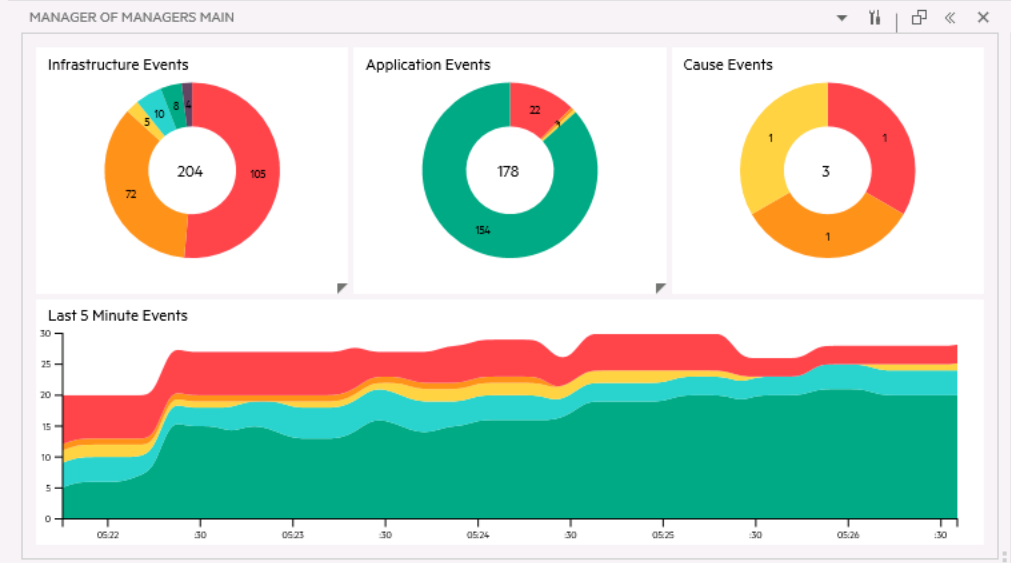


# Monitoring architecture





# HPE AppPulse Demo



EVENT BROWSER

<No Filter> <No Filter> Search Events (Ctrl+F)

| Sev | Prio | C | N | I | A | U | D | St... | Time Received       | Title   | Related CI               | User | Group |
|-----|------|---|---|---|---|---|---|-------|---------------------|---|--------------------------|------|-------|
| ✖   |      |   |   |   |   |   |   |       | 2/7/16 09:21:59 AM  | Metric 'status' changed status from 'good' to 'error'     |                          |      |       |
| ⚠   |      |   |   |   |   |   |   |       | 2/7/16 12:41:37 PM  | NNMi: C4K_IOSMODPORTMAN-4-POWERSUPPLYF                    |                          |      |       |
| ✖   |      |   |   |   |   |   |   |       | 2/7/16 12:41:37 PM  | Ping to ESX server unavailable                            |                          |      |       |
| ✖   |      |   |   |   |   |   |   |       | 2/7/16 12:41:37 PM  | ESX Application unavailable                               |                          |      |       |
| ✖   |      |   |   |   |   |   |   |       | 2/7/16 12:41:37 PM  | Ping to SharePoint VM unavailable                         |                          |      |       |
| ✖   |      |   |   |   |   |   |   |       | 2/7/16 12:42:01 PM  | SCOMAlert: AD Domain Availability Health Degraded         |                          |      |       |
| ✖   |      |   |   |   |   |   |   |       | 2/8/16 03:39:06 AM  | ESX Application unavailable                               |                          |      |       |
| ✖   |      |   |   |   |   |   |   |       | 2/8/16 03:41:03 AM  | ESX Application unavailable                               |                          |      |       |
| ✖   |      |   |   |   |   |   |   |       | 2/8/16 03:47:39 AM  | ESX Application unavailable                               |                          |      |       |
| ?   |      |   |   |   |   |   |   |       | 2/9/16 03:04:34 AM  | Test_AppPulseOM1_17                                       |                          |      |       |
| ✖   |      |   |   |   |   |   |   |       | 2/9/16 03:16:54 AM  | Alert: Stocks Availability Alert Triggered on Application |                          |      |       |
| ⚠   |      |   |   |   |   |   |   |       | 2/9/16 03:53:07 AM  | Metric 'License days remaining' changed status from       |                          |      |       |
| ✖   |      |   |   |   |   |   |   |       | 2/9/16 09:30:06 PM  | EventID: 0x00000400 (1024) - (NDP2006) Unexpecte          |                          |      |       |
| ✖   |      |   |   |   |   |   |   |       | 2/9/16 09:37:28 PM  | This is a test message                                    |                          |      |       |
| ✖   |      |   |   |   |   |   |   |       | 2/11/16 05:24:18 AM | Alert: Default Performance Alert Triggered on Applica     |                          |      |       |
| ✔   | ⚠    |   |   |   |   |   |   |       | 2/10/16 12:57:39 AM | Back to normal: Threshold violation(s) for Probe. Imp     | 2/ROOT/checkbooks        |      |       |
| ✔   | ⚠    |   |   |   |   |   |   |       | 2/10/16 01:17:39 AM | Back to normal: Threshold violation(s) for Probe. Imp     | 2/ROOT/checkbooks        |      |       |
| ✔   | ⚠    |   |   |   |   |   |   |       | 2/10/16 10:57:50 AM | Back to normal: Threshold violation(s) for Http Status    | 2/ROOT/checkbooks        |      |       |
| ✔   | ⚠    |   |   |   |   |   |   |       | 2/10/16 10:59:51 AM | Back to normal: Threshold violation(s) for Http Status    | 2/ROOT/checkbooks        |      |       |
| ✔   | ⚠    |   |   |   |   |   |   |       | 2/11/16 01:59:58 AM | Back to normal: Threshold violation(s) for latency. Im    | 2/ROOT/checkbooks        |      |       |
| ✔   | ⚠    |   |   |   |   |   |   |       | 2/11/16 03:32:58 AM | Back to normal: Threshold violation(s) for latency. Im    | 2/ROOT/checkbooks        |      |       |
| ✔   | ⚠    |   |   |   |   |   |   |       | 2/10/16 05:46:54 PM | Back to normal: Threshold violation(s) for Probe. Imp     | AdminServer (OBAAPP2)    |      |       |
| ✔   | ⚠    |   |   |   |   |   |   |       | 2/11/16 04:08:28 AM | Back to normal: Threshold violation(s) for latency. Im    | AdminServer (OBAAPP2)    |      |       |
| ✔   | ⚠    |   |   |   |   |   |   |       | 2/10/16 05:46:54 PM | Back to normal: Threshold violation(s) for Probe. Imp     | AdminServer (OBAFE1)     |      |       |
| ✔   | ⚠    |   |   |   |   |   |   |       | 2/11/16 05:06:39 AM | Back to normal: Threshold violation(s) for latency. Im    | AdminServer (OBAFE1)     |      |       |
| ✔   | ⚠    |   |   |   |   |   |   |       | 2/10/16 10:09:21 AM | Back to normal: Threshold violation(s) for Probe. Imp     | AdminServer (obafe2)     |      |       |
| ✔   | ⚠    |   |   |   |   |   |   |       | 2/11/16 03:32:28 AM | Back to normal: Threshold violation(s) for latency. Im    | AdminServer (obafe2)     |      |       |
| ✔   | ⚠    |   |   |   |   |   |   |       | 2/11/16 05:05:38 AM | Threshold violation(s) for GC - GC Time Spent in Co       | AdminServer (obapremium) |      |       |

EVENT DETAILS

**Alert: Default Availability Alert Triggered on Application : New OMI Test, Trigger Cause: 3 out of 5 transactions failed.**

General

Additional Info

Source Info

Actions

Annotations

Custom Attributes

Related Events

History

Resolver Hints

Instructions

Forwarding

ID: a46e2ba7-4f9a-4ca2-be0c-e1

Severity: ✖ Critical

Lifecycle State: 📄 Open

Priority:

Assigned Group:

Assigned User:

Category: **Application**

Subcategory: **bpm.transaction.alert.type**

Control Transferred: -

Related CI:

Node:

Source CI:

Time Created: **2/4/15 11:14:50 PM**

Time First Received: **2/4/15 11:14:50 PM**

Time Received: **2/4/15 11:14:50 PM**

Time State Changed: -

Event Type Indicator: -

Duplicate Count: **0**

Title: Alert: Stocks Availability Alert Triggered on Application : Advantage Web, Trigger Cause: 1 out of 5 transactions failed.





# Summary

# AppPulse Suite benefits summary

Proactively identify app issues before users do

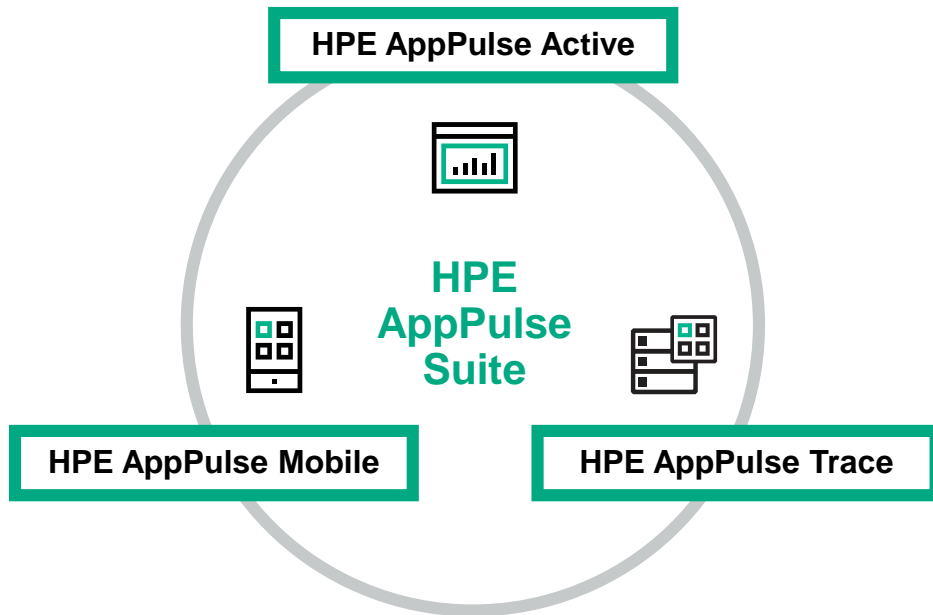
Identify which performance and stability issues are impacting real app users

Comprehensive SaaS APM solution

Correlate issues from user experience, to application execution, to its underlying infrastructure



# Real customers, real results.



“Performance data mined in HPE AppPulse helped us build better apps for our users.”



“HPE AppPulse took us from a low-star to a 5-star app in less than a month”



“Slowdowns directly impacted our revenue. HPE AppPulse traced transactions E2E to resolve problems fast!”



**Hewlett Packard**  
Enterprise

**Thank you**

[hpe.com/software/apppulse](https://hpe.com/software/apppulse)



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