

Dynatrace APM

September 18th 2015

Mike Ditmar | APM Sales Engineer

Digital is Changing The Game Of Business



80% of all apps are used once, then deleted.



4 out of 5 check their smartphones within the first 15 min of waking up



94%

Use smartphones while shopping in store



Aaron McIver
@aaron_mcliver



@nfl attempt at media across devices is frustrating. Videos not playing on mobile is a throwback to 2008. #techfail #nfl

Reply Retweet Favorite More

11:39 AM - 24 Aug 2014

Existing technology assets are not ready



Mobile performance still
30-40% slower than
Desktop



53% of CxOs
find understanding customer behavior an
extremely significant challenge

Only **19%** of
executives believe
they have the right
technology to execute



What we believe



- Starts and Ends with the User - Not just the App
- It's about preventing problems, not just reacting
- Gap-free data is essential
- The goal is Dev/Ops not Just/Ops

Mobile • Web • Smart Devices • Cloud Services

User Insights



Application Insights

Java • .NET • PHP • Node.js • z/OS • Nginx



Mobile • Web • Smart Devices • Cloud Services

User Insights



Application Insights

Java • .NET • PHP • Node.js • z/OS • Nginx



Mobile • Web • Smart Devices • Cloud Services

User Insights



SAP • Citrix • Oracle EBS • VoIP • TCP/IP

App-Aware Network Insights



Application Insights

Dynatrace Application Monitoring



Dynatrace User Experience Management

User Insights

Dynatrace Synthetic Monitoring



Dynatrace Data Center Real User Monitoring

App-Aware Network Insights





Lifecycle

Application Insights

Dynatrace Application Monitoring



Expert Services

Dynatrace User Experience Management

User Insights

Dynatrace Synthetic Monitoring



Dynatrace Data Center Real User Monitoring

App-Aware Network Insights





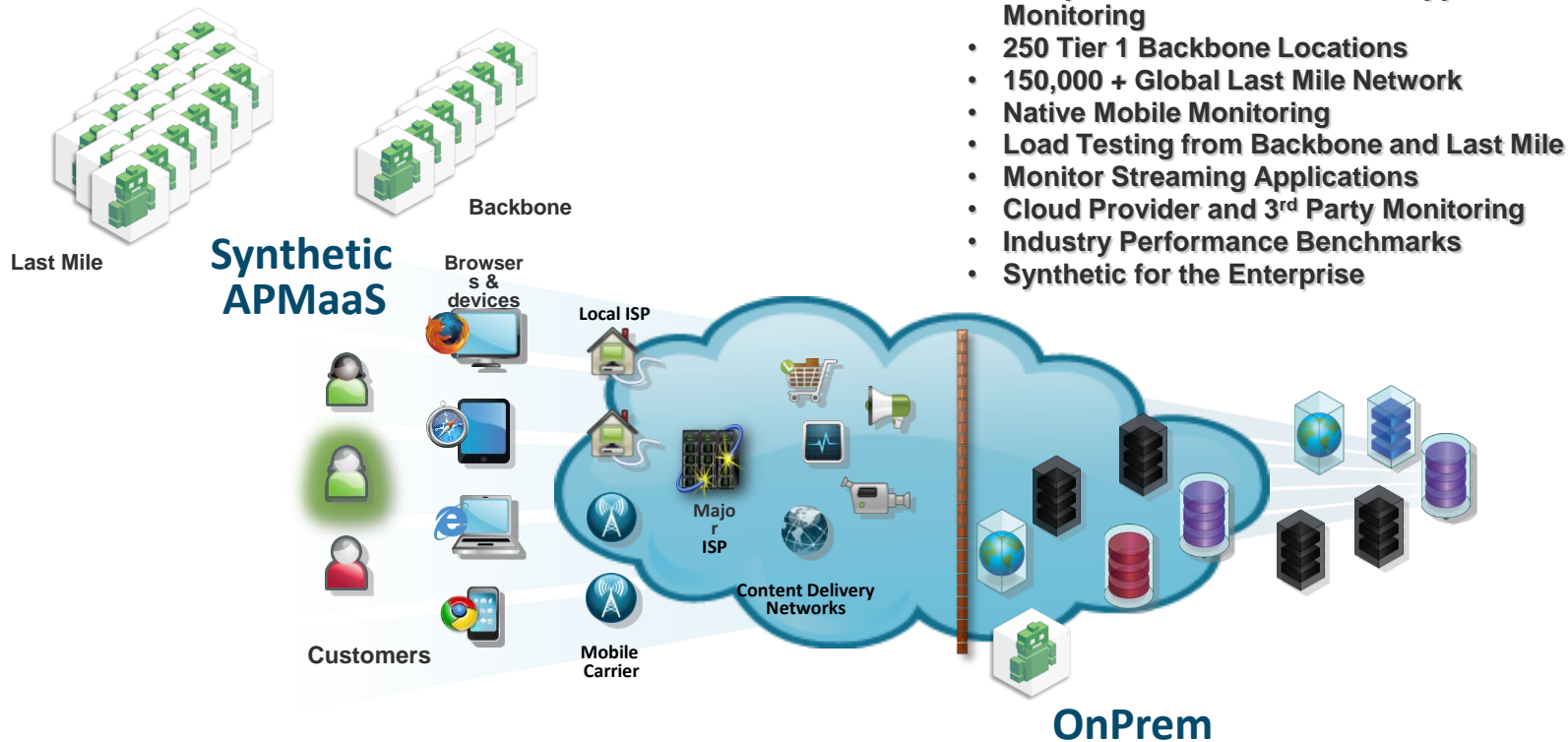


User Insights

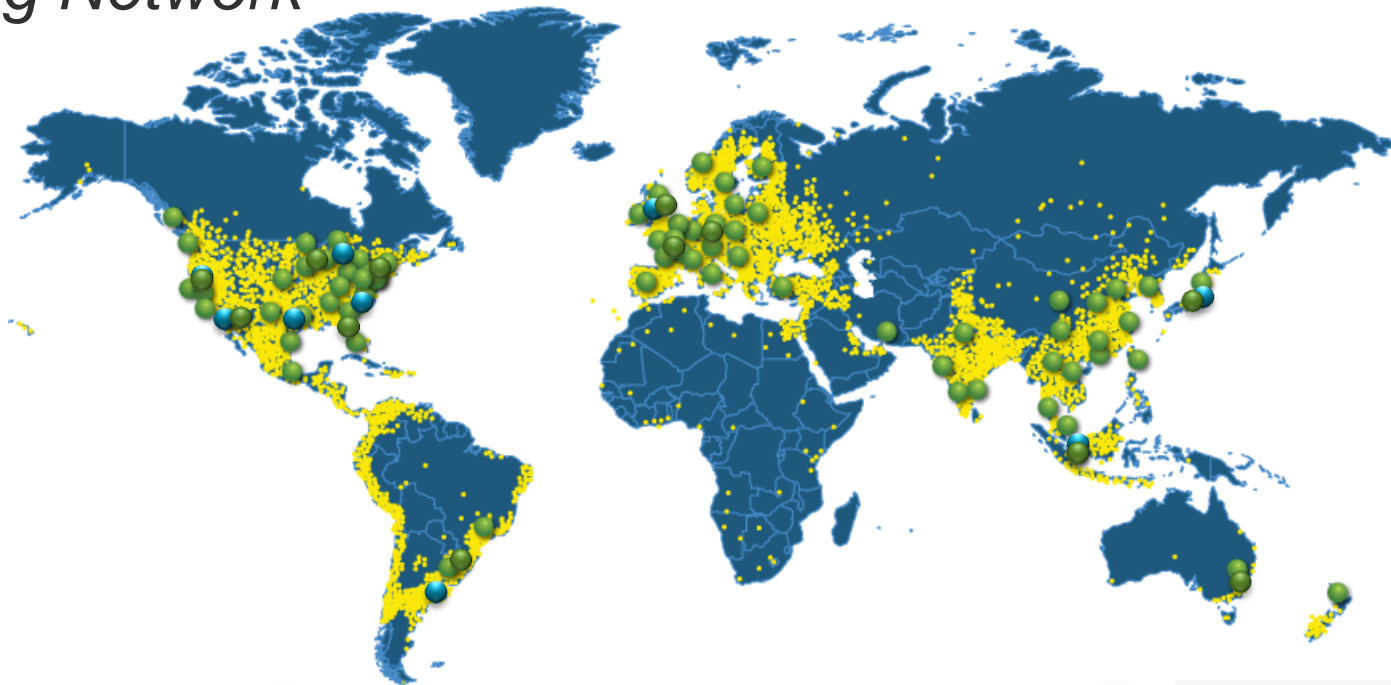
Dynatrace Synthetic Monitoring



Dynatrace Synthetic Transaction Monitoring



The World's Most Comprehensive Performance and Testing Network



Synthetic Agents

Deployed and managed
by Dynatrace

Backbone



**Web Performance
Management**
100+ locations

Last Mile



**Web Performance
Management and
Load Testing**
10,000's+ locations

Cloud



**High Volume Load
Generation**
13 Global locations

Mobile



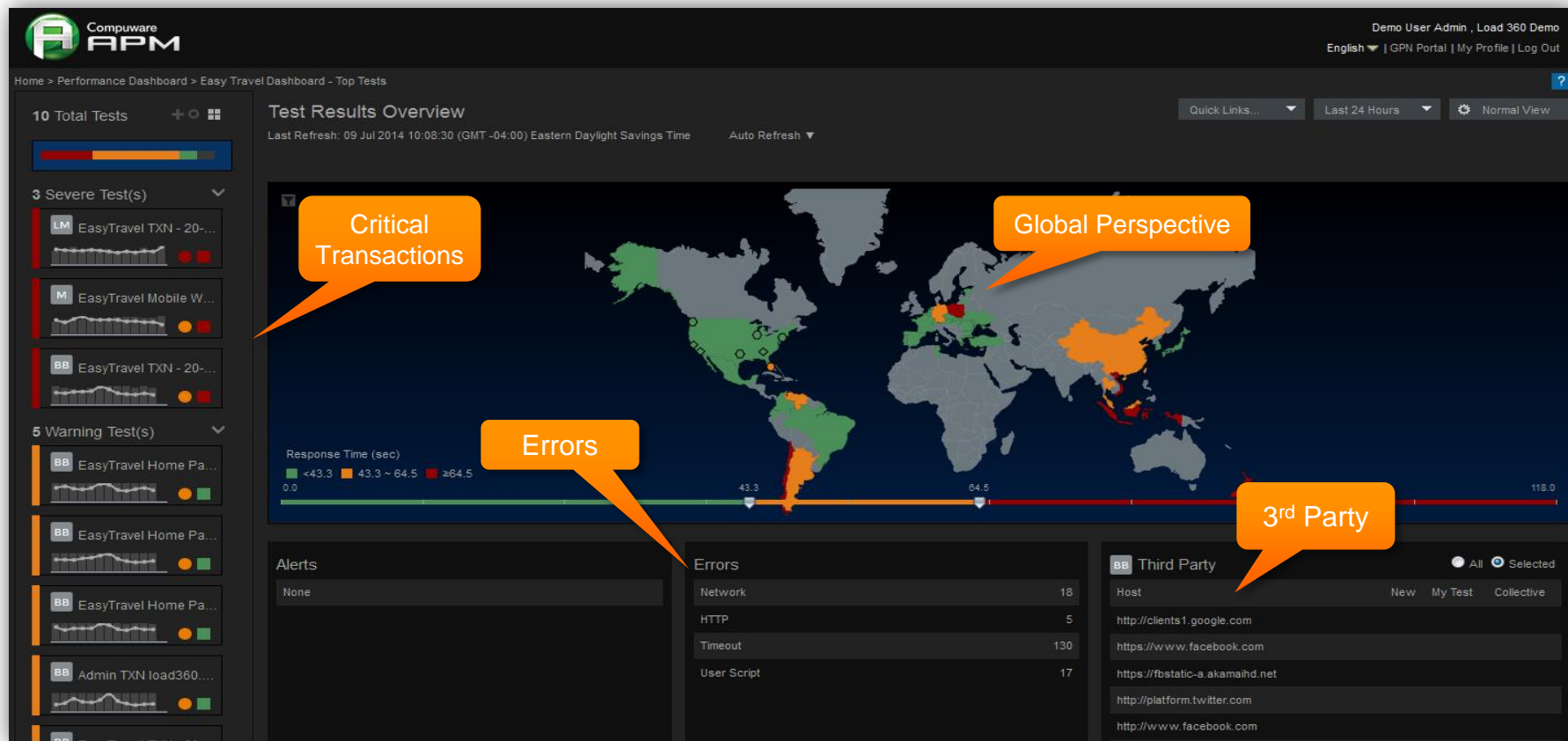
**Dozens of countries
connected to real
wireless carriers**

Synthetic Private Agents

Deployed by Customer

- SaaS Private Agents
- SaaS Private Peers
- Enterprise Synthetic (OnPrem)

APM Portal - Out of The Box Dashboards



Automated Diagnostics and Drilldown to PurePath



Home > Interactive Charts > Unsaved chart

(GMT-04:00) Eastern Daylight Savings Time

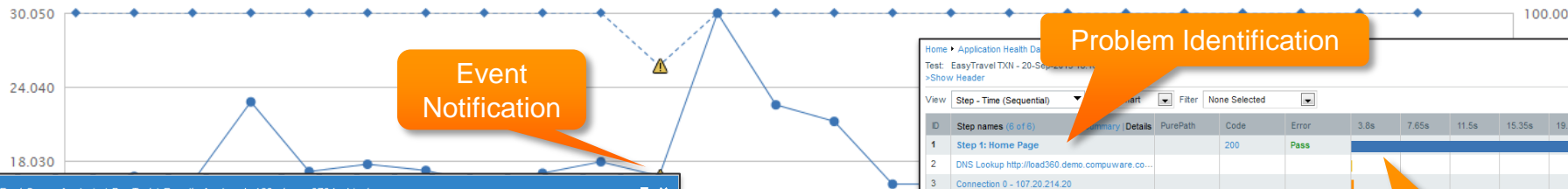
Select Tests: EasyTravel TXN - 20-Sep-2013 18:16:21 - 3 - IE Agent

Save Action

8 Jul 2014 10:00 - 9 Jul 2014 10:27 Last 24 Hours Custom Interval: 1 hour Filters: None

Average Response Time by Test Percent Availability by Test Add Series

Templates



Root Cause Analysis | By: Test | Results Analyzed: 168 steps, 3784 objects

Test Name: EasyTravel TXN - 20-Sep-2013 18:16:21 - 3 - IE... Response Time: 22.809s Availability: 100% Jul 08 2014 13:00

Analysis Window: Jul 08 2014 between 10:00 and 14:00

Problems 2 Locations 6/7

Problem Types Page Content Performance

2 Problems > Page Response Time Increase (Performance)-Problem Summary

RCA lists the top actions (object retrieval or connection times) that contributed most to the page response time increase. Actions are presented in order of page contribution percentage. Page contribution is calculated by dividing the action response time by the overall page response time

Rank	Top Causes Identified by the Root Cause Analyzer across all Locations	Critical Action
1	A page response time increase was found on step 1: Home Page. The number 1 ranked root cause was the following action: long image object retrieval response time for host(http://load360.demo.compuware.com) and object(img/header1.png).	image object retrieval with a response time of 6475ms
2	A page response time increase was found on step 1: Home Page. The number 2 ranked root cause was the following action: long application object retrieval response time for host(http://load360.demo.compuware.com) and object(/).	application object retrieval with a response time of 6176ms
3	A page response time increase was found on step 1: Home Page. The number 3 ranked root cause was the following action: long text object retrieval response time for host(http://load360.demo.compuware.com) and object(CalculateRecommendations).	text object retrieval with a response time of 3670ms

View All

Automatic Problem Analysis

Problem Identification

1st Byte Time

Home > Application Health Dashboard

Test: EasyTravel TXN - 20-Sep-2013 18:16:21 - 3 - IE Agent

View: Step - Time (Sequential) Filter: None Selected

ID	Step names (6 of 6)	Summary	Details	PurePath	Code	Error	3.8s	7.65s	11.5s	15.35s	19.15s
1	Step 1: Home Page				200	Pass					
2	DNS Lookup http://load360.demo.compuware.co...										
3	Connection 0 - 107.20.214.20										
4	http://load360.demo.compuware.com/ [0]				200	Pass					
5	Connection 1 - 107.20.214.20										
6	Connection 2 - 107.20.214.20										
7	Connection 3 - 107.20.214.20										
8	Connection 4 - 107.20.214.20										
9	Connection 5 - 107.20.214.20										
10	DNS Lookup https://apis.google.com - 74.125.23...										
11	Connection 6 - 74.125.239.37										
12	DNS Lookup http://clients1.google.com - 74.125...										
13	Connection 7 - 74.125.239.40										
14	http://clients1.google.com/vcsp [7]				200	Pass					
15	DNS Lookup http://iglobal-ocsp.geotrust.com - ...										
16	Connection 8 - 23.5.251.27										
17	http://load360.demo.compuware.com/dtagent56...				200	Pass					

Synthetic Classic Real User Monitoring Real User Monitoring Mixed

Average Response Time (sec)	Percent Availability (%)	Screen Captures	Product
17.663	99.40		

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Dynatrace Data Center Real User Monitoring

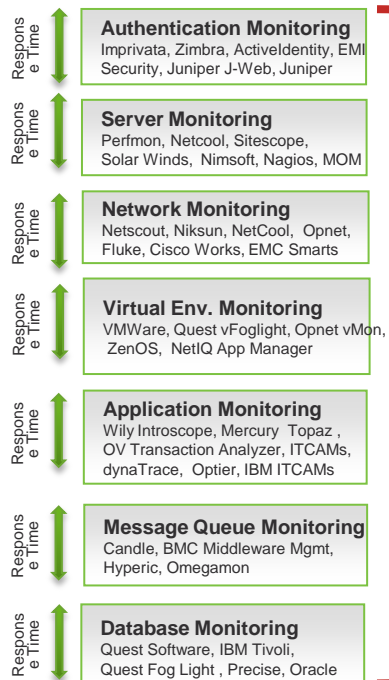
App-Aware Network Insights



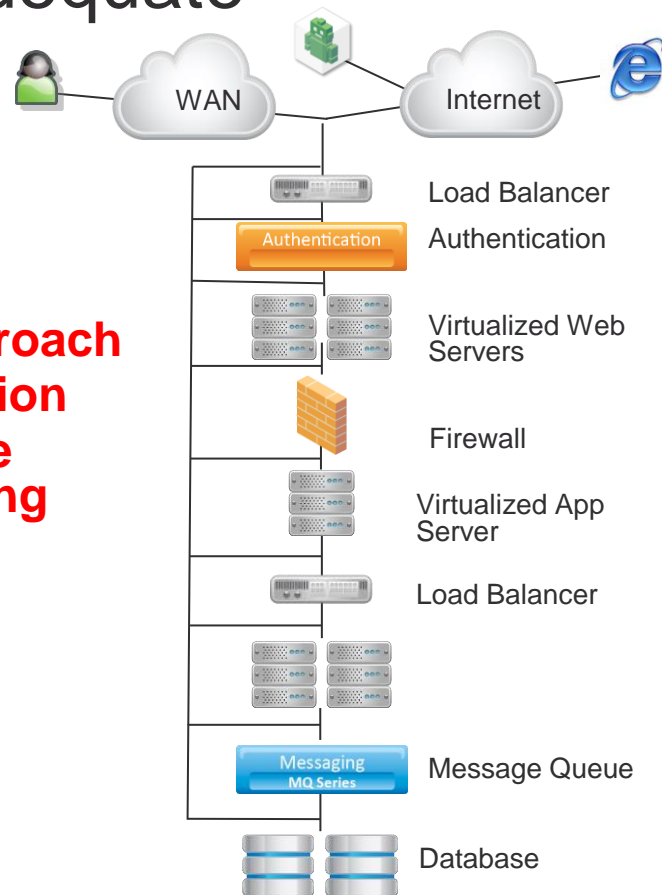
Traditional Monitoring is Inadequate



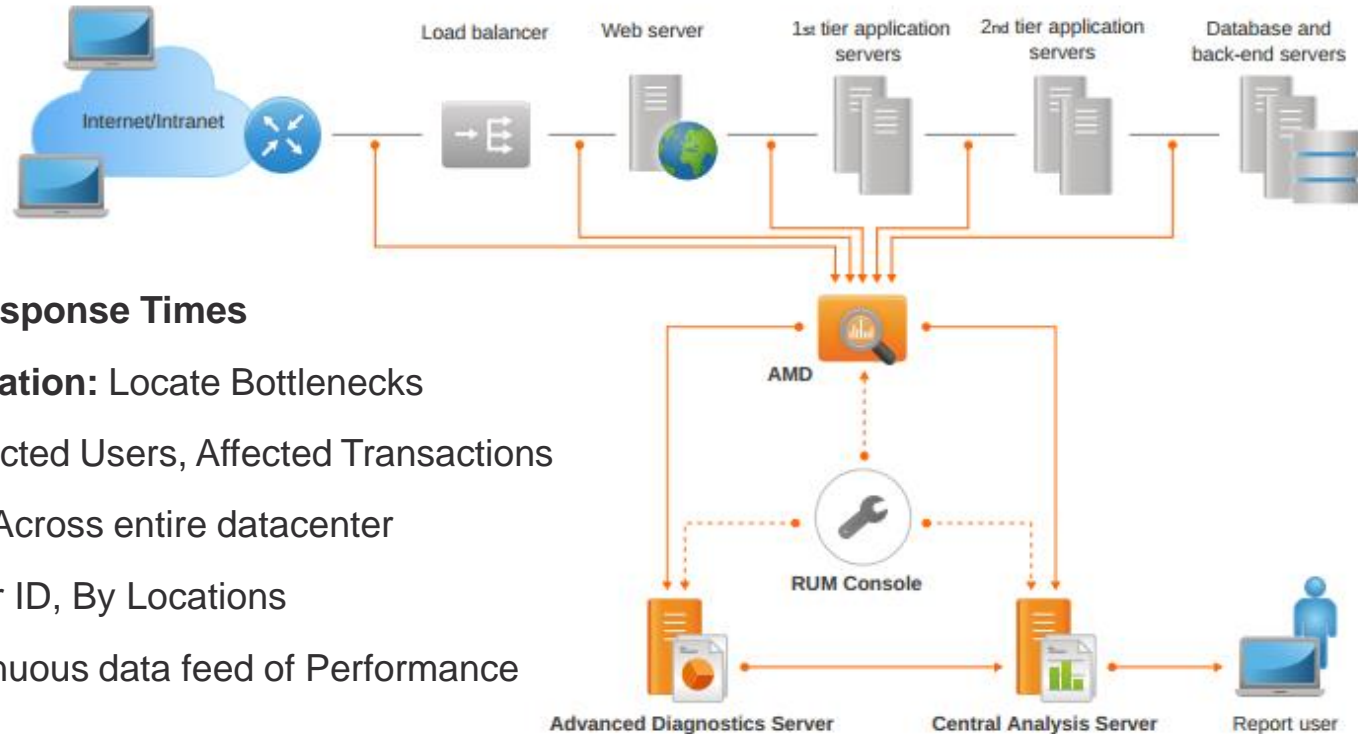
Component Level Monitoring Tools



**A Silo Based Approach
Makes Correlation
And Effective
Troubleshooting
Impossible**



How Does It Work?



- **Real End-User Response Times**
- **Fault Domain Isolation:** Locate Bottlenecks
- **Prioritization:** Affected Users, Affected Transactions
- **All Applications:** Across entire datacenter
- **All Users:** By User ID, By Locations
- **Always On:** Continuous data feed of Performance

End-to-End Visibility for all Business-Critical Applications



Application Health Status

Refresh on new data Actions Average

8/4/14 18:00 - 8/4/14 19:00

Summary ▸ Applications

Monitored Applications

Total 5 0 1 4

Application Health



Affected Users

Business Impact

68 of 223 Users (30.5 %) - Performance

Alert Notifications



Application	Transactions	Health Index (trend over previous 24 hours)	Synthetic	Business Impact ▼ Affected users/visits	Network	Data Center Tiers
easyTravel Customer		 1.16 s 11.7 k		 50 of 116 Users (43.1 %) - Performance		
SAP ERP		 5.36 k		 16 of 53 Users (30.2 %) - Performance		
easyTravel B2B		 2.35 s 435		 2 of 12 Users (16.7 %) - Performance		
Drupal7 PHP		 2.04 s 508		 0 of 49 Visits (0 %)		
Oracle EBS		 665 ms 355		 0 of 4 Users (0 %)		

Response Time Spike

Transaction Health

Cross-Tier FDI

Network Health

Domain Isolation Across Complex Multi-Tiered Applications

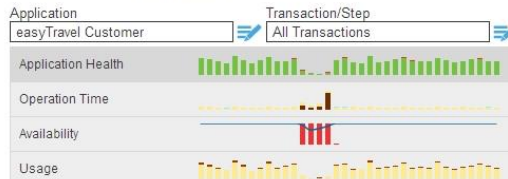


Data Center Analysis

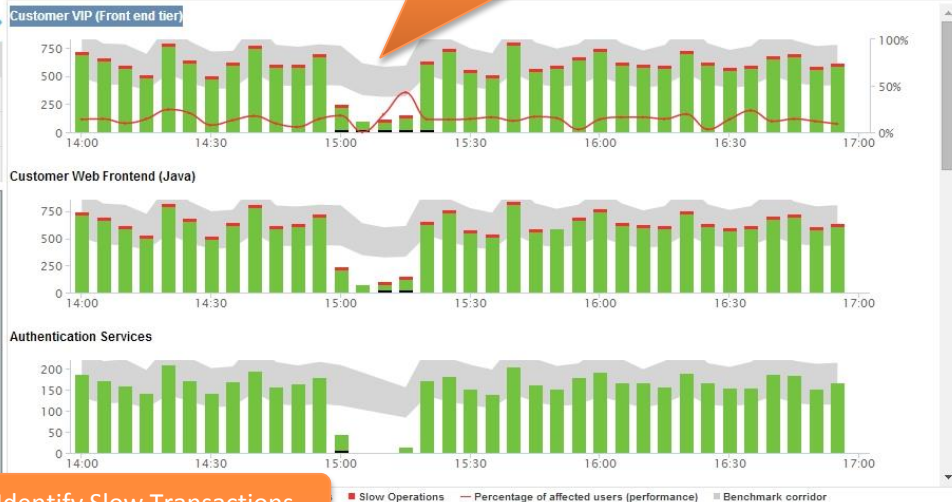
Resolution: 1 period Time range: Custom (8/20/14 14:00-8/20/14 17:00)

Actions Average ?

Infrastructure Performance



Tier	Health	Operation time	Requests
Customer VIP	98.5 %	1.02 s	20.6 k
Customer Web Frontend (Java)	99.1 %	822 ms	21.3 k
Authentication Services	100 %	12.8 ms	5.53 k
Business Backend Server (Java)	96 %	41.7 ms	282 k
Payment Backend (NET)	100 %	232 ms	1.32 k



Software Module Performance

Operation	Requests	Slow operations	Performance	Users	Operation time	Availability
/	2.06 k	160	91.9 %	205	2.69 s	96.5 %
/orange-booking-review.jsf	1.97 k	24	98.8 %	181	786 ms	100 %
All other operations	2.36 k	16	99.3 %	215	1.31 s	100 %
/orange.jsf._inform=loginform	1.02 k	6	99.4 %	11	290 ms	99.1 %
/orange-booking-finish.jsf	1.76 k	3	99.8 %	15	1.16 s	100 %

User Performance

User name	Slow operations	Health
61.135.155.250	19	17.4 %
INDIA: Bangalore - VSNL	15	27.3 %
12.107.189.227 (APM-DYNATRACE)	14	95.1 %
SINGAPORE: Singapore - Singtel	12	23.5 %

Domain Isolation Across Complex Multi-Tiered Applications



Data Center Analysis

Resolution: 1 period Time range: Custom (8/20/14 14:00-8/20/14 17:00)

Actions Average ?

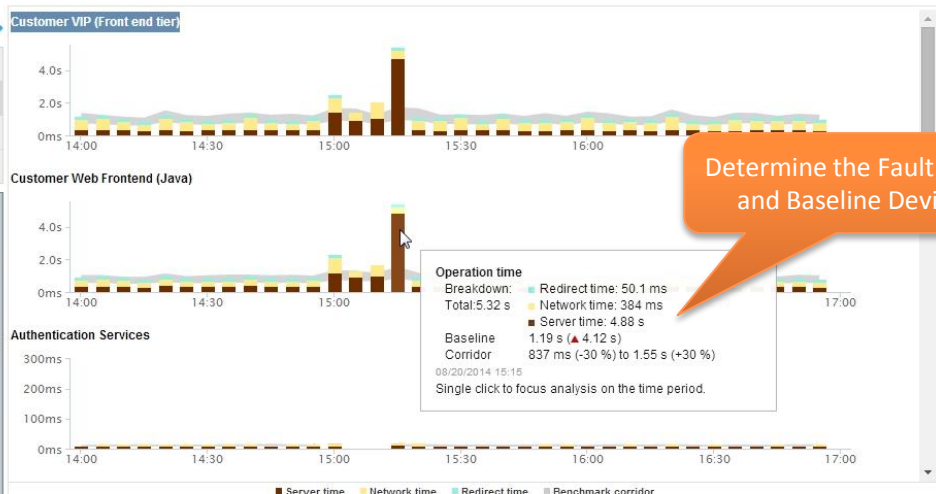
8/20/14 14:00 - 8/20/14 17:00

Infrastructure Performance

Application: easyTravel Customer Transaction/Step: All Transactions



Tier	Health	Operation time	Requests
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Software Module Performance 8/20/14 14:00 - 8/20/14 17:00

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All other operations	2.36 k	16	99.3 %	215	1.31 s	100 %
/orange.jsf...inform-loginform	1.02 k	6	99.4 %	11	290 ms	99.1 %
/orange-booking-finish.jsf	1.76 k	3	99.8 %	15	1.16 s	100 %
/result.jsf?dest=paris	121	3	97.5 %	11	2.8 s	100 %

User Performance 8/20/14 14:00 - 8/20/14 17:00

User name	Slow operations	Health
61.135.155.250	19	17.4 %
INDIA: Bangalore - VSNL	15	27.3 %
12.107.189.227 (APIM-DYNATRACE)	14	95.1 %
SINGAPORE: Singapore - Singtel	12	23.5 %
222.73.36.178	9	18.2 %

Application Insights

Dynatrace Application Monitoring

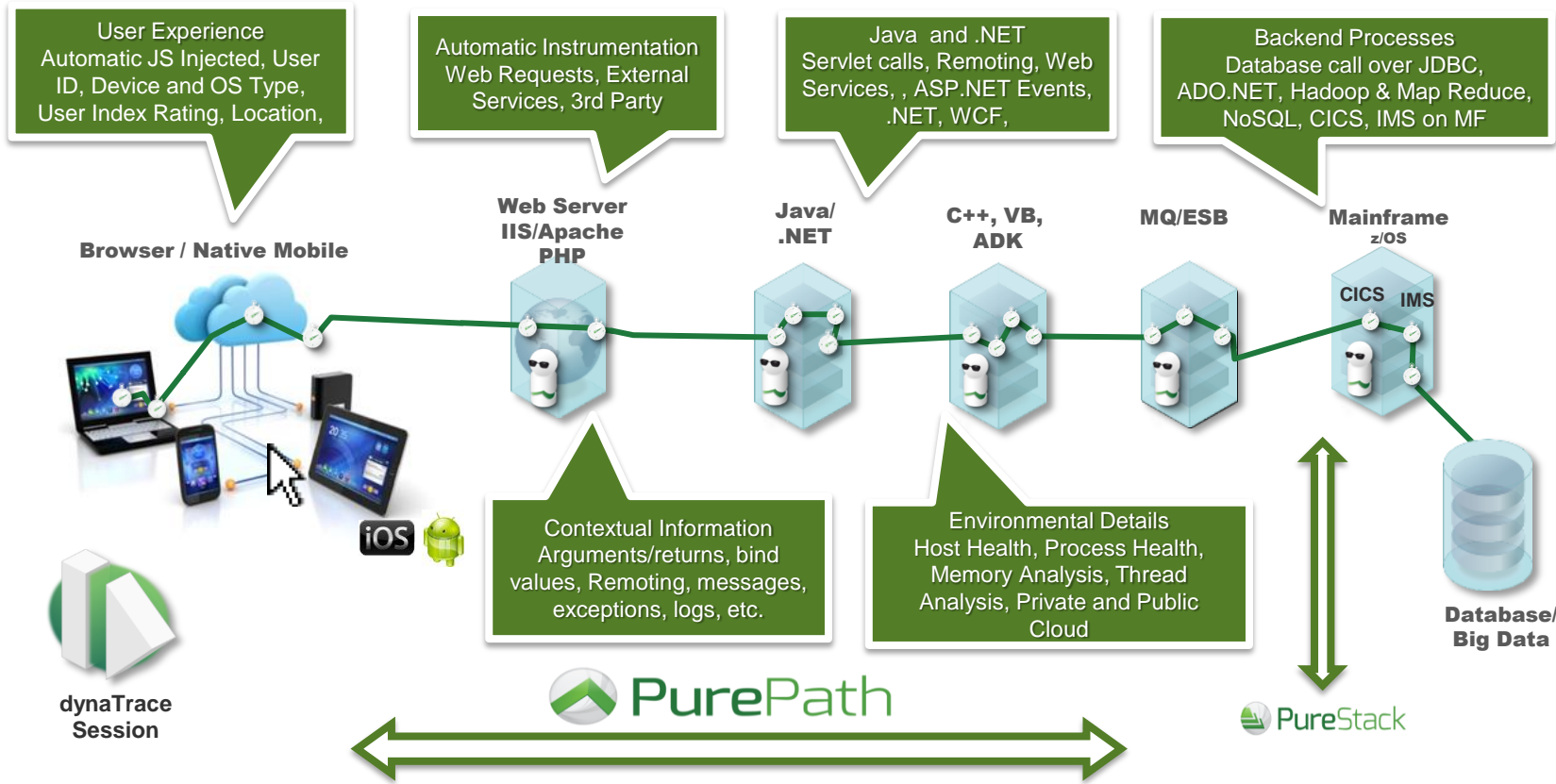


Dynatrace User Experience Management

User Insights



Designed for Complete Transaction Coverage





Your Journey

Trip Destination

From Date

To Date

Fill out the boxes above and your results will appear below.

Search

Recommendations



Monte Plata - La Cisterna

\$ 450.80

If you wish to stay in a hotel that has a friendly staff and an inviting ambience that reminds you of home then head to the Grand Hotel.

Sep 11 - Sep 19

Book Now



Murtaugh - Homosassa Springs

\$ 703.00

If you wish to stay in a hotel that has a friendly staff and an inviting ambience that reminds you of home then head to the Grand Hotel.


Jan 18 - Jan 21


Book Now

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Your Journey

Trip Destination

New York

From Date

To Date

Found 3 journeys. [\[Clear\]](#) [\[Permlink\]](#)

[Search](#)



Business Trip

\$ 299.99

If you wish to stay in a hotel that has a friendly staff and an inviting ambience that reminds you of home then head to the Grand Hotel.

Sep 18 - Sep 25

[Book Now](#)



Honeymoon Extravaganza

\$ 188.00

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Sep 11 - Sep 25


[Book Now](#)




Lake Nebagamon - New York

\$ 1543.80

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[Logout](#)


Booking Transaction

1 Log In

2 Review

3 Payment

4 Finish



New Search

To look for a different journey please press the New Search button.

Trip details

Journey

[Business Trip](#)

Destination

New York

Tenant

Speed Travel Agency

Travellers

2 adults

Flight price

Round-trip ticket

\$ 171.02

Hotel price

1 room, 7 nights

\$ 399.06

Taxes and fees

\$ 29.90

Total


\$ 599.98

Avg/person

\$ 299.99

Back

Next



G+1 356

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FARE TERMS AND CONDITIONS: Sample round-trip and one-way fares posted on [www.easytravel.com](#) are per person and include all applicable taxes and fees including, but not limited to September 11th Security Fee of up to \$500 for each flight segment originating at a U.S. airport; Passenger Facility Charges of up to \$18, depending on itinerary; Federal Segment Fees of \$3.70 per segment; and foreign and U.S. government-imposed charges of up to \$400 per international round-trip flight, depending on routing and destination. A flight segment is defined as one takeoff and one landing. Fares are subject to availability and change without notice. If advertised fare is not available for dates chosen, higher fares may be offered. Actual prices may vary based on actual routing, fluctuations in currency (international only), and day of week.


localhost:8079/orange-booking-payment.jsf?journeyId=5

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Booking Transaction

1 Log In


2 Review

3 Payment

4 Finish





Credit Card Information

(Secure SSL Encrypted Transaction)



Credit Card Type *

VISA



Credit Card Number *

2603254964964529696

Card Owner's Name *

Jerry Lobenstein

(As it appears on your credit card)

Expiration Date *


December

2017

(Please ensure expiration date is correct)


Verification Number *

1157


 (3 or 4 digit number from your card)


(*) Required


Back




Next


 Privacy Policy





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Booking Transaction

1 Log In

2 Review

3 Payment

4 **Finish**

The booking procedure is almost complete: Press the Finish button to actually perform the booking.

Back

Finish

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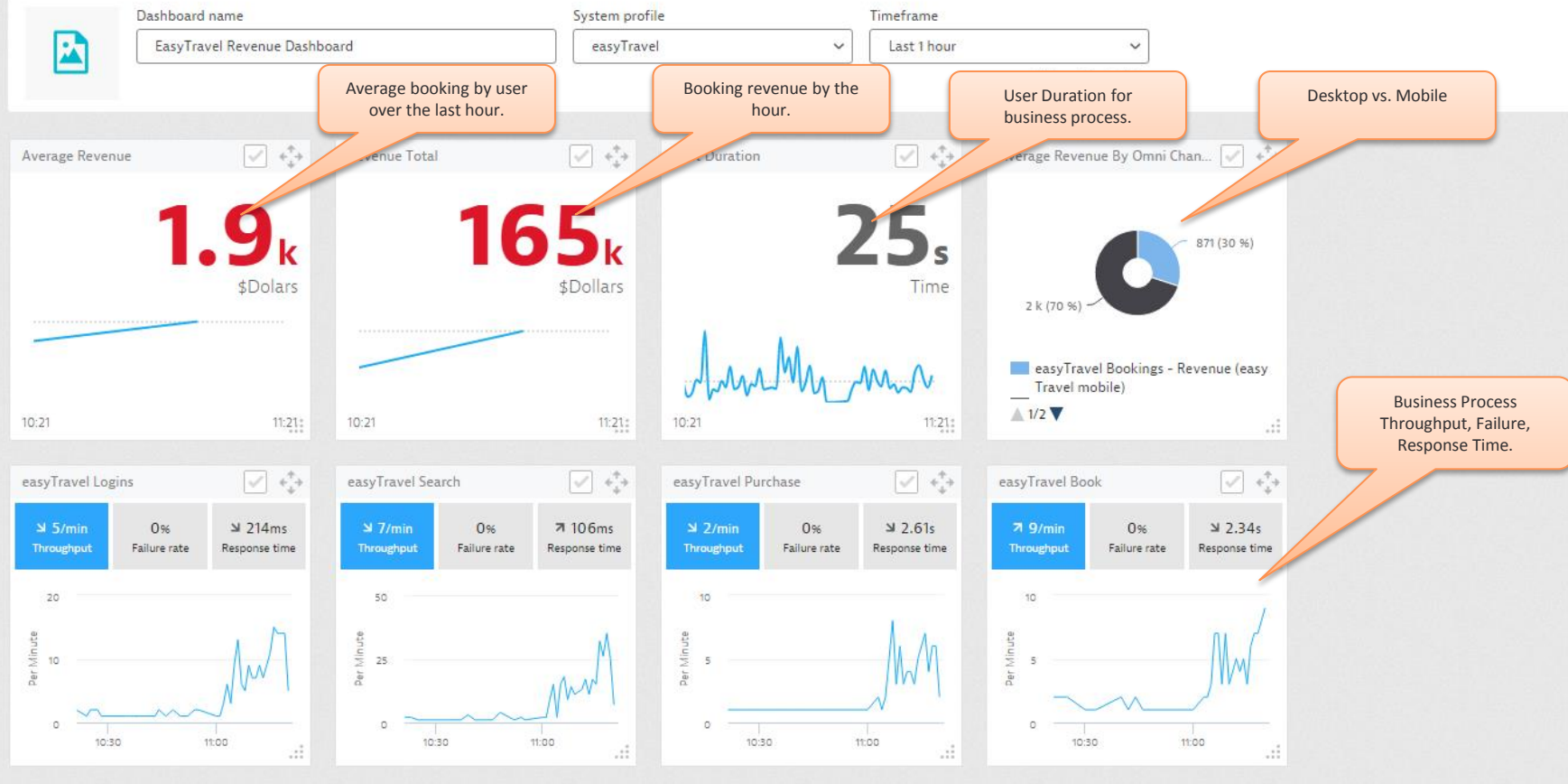
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Key:

Deployed

Not Deployed

Not Applicable

Application	DC RUM	Dynatrace	Synthetics / Private Enterprise
Treasury - SUW	Deployed	Deployed	Not Deployed
Michigan.gov	Not Applicable	Not Applicable	Deployed
Bridges	Deployed	Deployed	Deployed
BAM	Not Deployed	Deployed	Deployed
SACWIS	Not Deployed	Deployed	Not Deployed
MCP	Not Deployed	Deployed	Not Deployed
MIWIC	Not Deployed	Deployed	Not Deployed
MVIC	Deployed	Not Deployed	Deployed
BOS	Deployed	Not Applicable	Deployed

Dashboards In-Use at The SoM



Applications

Agency	Service Title	Red Card	Business Criticality	Service Quality				RFC
				Current	Critical State (Past 24 Hours)	During Period	Available	
Education	Michigan Electronic Grants Sy	No	Medium	Normal	0s	<div><div></div></div>	<div><div></div></div>	
Secretary of State	Michigan Voter Information C	Yes	High	Normal	0s	<div><div></div></div>	<div><div></div></div>	
Secretary of State	Uniform Commerical Code	Yes	High	Normal	0s	<div><div></div></div>	<div><div></div></div>	
Technology, Management and	Vision (ORS)	Yes	High	Normal	0s	<div><div></div></div>	<div><div></div></div>	
Licensing and Regulatory Affai	MLCC - On-Line Liquor Orderi	No	High	Normal	42m 57s	<div><div></div></div>	<div><div></div></div>	
Education	Bureau of Assessment and Ac	Yes	High	Normal	0s	N/A	<div><div></div></div>	
Technology, Management and	Michigan Student Data System	Yes	High	Normal	0s	<div><div></div></div>	<div><div></div></div>	
Education	Cash Management System	Yes	High	Normal	0s	<div><div></div></div>	<div><div></div></div>	
Community Health	StarLIMS	Yes	Urgent	Normal	0s	<div><div></div></div>	<div><div></div></div>	
Technology, Management and	Michigan Continuity Managem	Yes	Urgent	Normal	0s	<div><div></div></div>	<div><div></div></div>	
Licensing and Regulatory Affai	Michigan Business OneStop	Yes	High	Normal	0s	<div><div></div></div>	<div><div></div></div>	
Agriculture	USA Herds	No	High	Normal	0s	<div><div></div></div>	<div><div></div></div>	

1 2 3

Transactions

Transactions		Service Quality		Robot Response Time
		Current	Critical State Time (Past 24 Hours)	
Database_HCS313M		<div><div></div></div>	0s	1ms
Database_HCS313M		<div><div></div></div>	0s	1ms
All other		<div><div></div></div>	0s	
2 Login		<div><div></div></div>	0s	4.91s
MEGSPius_Database		<div><div></div></div>	0s	80ms
ReportSrvr_HCS313M		<div><div></div></div>	0s	1ms
1 Launch Homepage		<div><div></div></div>	0s	3.14s

Servers

Service Title		Service Quality	
		Current	Duration
Application		<div><div></div></div>	3m 3s
Web		<div><div></div></div>	234d 8h
Database		<div><div></div></div>	4d 13h

Network

County		Service Quality		Performance	
		Current	Duration	Robot	Real User
TBHC		<div><div></div></div>	8h 37m	4.02s	0s
Internet		<div><div></div></div>	234d 16h	0s	11.55s
LSHC		<div><div></div></div>	82d 16h	0s	0s
Default		<div><div></div></div>	9h 1m	0s	0s
Ingham County		<div><div></div></div>	9h 1m		0s

Department of State

Application	Red Card	Service Quality			RFC
		Current	▲	Critical State (Today)	
Uniform Commercal Code	Yes	Normal	●	0s	
MVIC	Yes	Normal	●	0s	
BOS	Yes	Normal	●	0s	
Qualified Voter File	Yes	Normal	●	0s	
Web Renewal	Yes	Normal	●	0s	
Elections Management Port	Yes	Normal	●	0s	
BAM	Yes	Normal	●	0s	

Department of Education

Application	Red Card	Service Quality			RFC
		Current	▲	Critical State (Today)	
SAMS	Yes	Normal	●	0s	
Item Bank	Yes	Normal	●	0s	
SECURE SITE	Yes	Normal	●	0s	
MEGSPLUS	No	Normal	●	0s	
Cash Management System	Yes	Normal	●	0s	
MOECS	No	Normal	●	0s	

Department of Human Services

Application	Red Card	Service Quality			RFC
		Current	▲	Critical State (Today)	
ASCAP	Yes	Normal	●	0s	
MiCSES	Yes	Normal	●	0s	

Dept. of Agriculture and Rural Development

Application	Red Card	Service Quality			RFC
		Current	▲	Critical State (Today)	
USA Herds	No	Normal	●	0s	


Dept. of Technology Management & Budget

Application	Red Card	Service Quality			RFC
		Current	▲	Critical State (Today)	
Michigan Student Data Syst	Yes	Normal	●	0s	
Data Exchange Gateway	Yes	Normal	●	0s	
ORS	Yes	Normal	●	0s	
BUY4MICHIGAN	Yes	Normal	●	0s	
Educational Entity Master	Yes	Normal	●	0s	
Continuity Management So	Yes	Normal	●	0s	
SMMS	Yes	Normal	●	0s	

Dept. of Licensing and Regulatory Affairs

Application	Red Card	Service Quality		RFC
		Current	Critical State (Today)	
AWARE	No	Normal	0s	
On-Line Liquor Ordering	No	Normal	21m 59s	
OneStop	Yes	Normal	0s	

Department of Corrections

Application	Red Card	Service Quality		RFC
		Current	Critical State (Today)	
NEXTGEN	Yes	Normal 	0s	

Department of Community Health

Application	Red Card	Service Quality			RFC
		Current		Critical State (Today)	
StarLIMS	Yes	Normal		0s	
CHAMPS	Yes	Normal		0s	
Data Hub	Yes	Normal		0s	



7,000 + Customers

Including: 17 of the top 20 Online
retailers

100,000 + community members

This is Dynatrace:

- Largest Market share
- Leading Customer sat
- Largest expertise in APM

#1

Gartner Market Share

89

Net Promoter Score

750

R & D Technical Experts



Thank You



The new generation of user-centric application performance management