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FORCE™

FORCE FOR BUSINESS | RUSSIA

Мониторинг и анализ производительности приложений на основе Riverbed SteelCentral

riverbed®

Производительность  
Приложений = Производительность  
Бизнеса



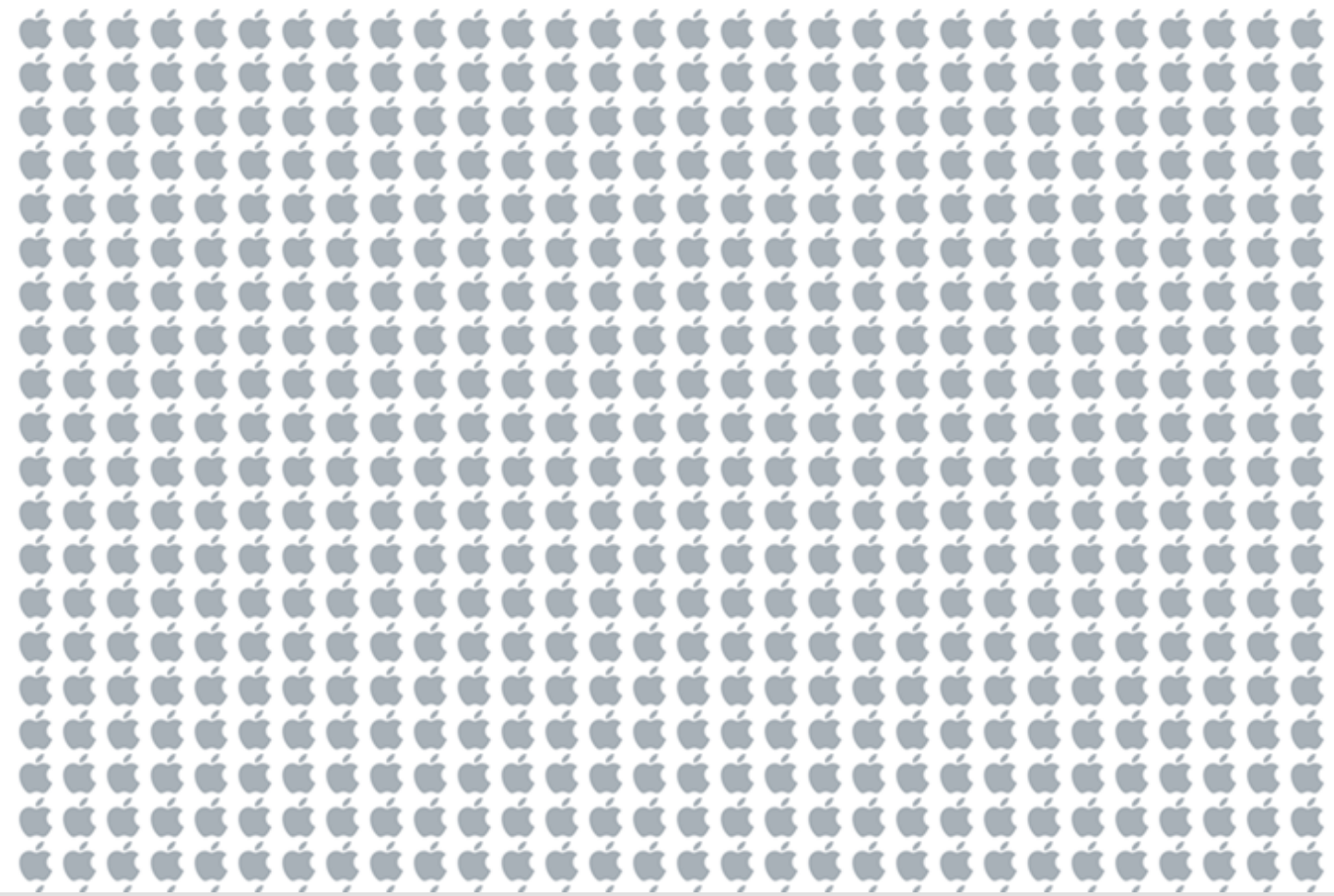
«... простой для 10,000 человек на ЧАС оборачивается убытками  
свыше \$1М...»

Jay Haynes, Landscape Operations & Integrations Manager, Shell

# Apple

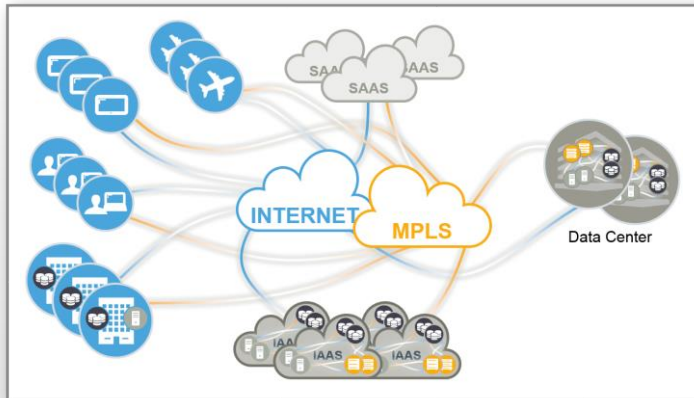
makes **\$4540** per second.

They have made **\$413,140** more since you've been here.

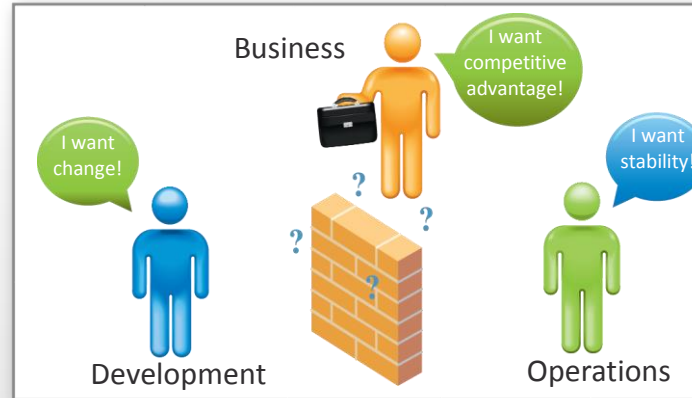


# Вызовы для бизнеса и ИТ

Возрастающая сложность



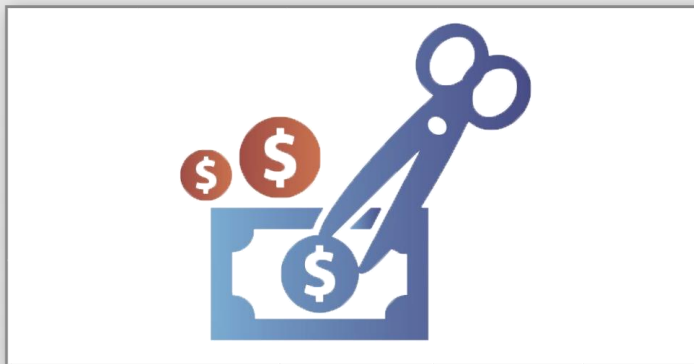
противоречащие требования



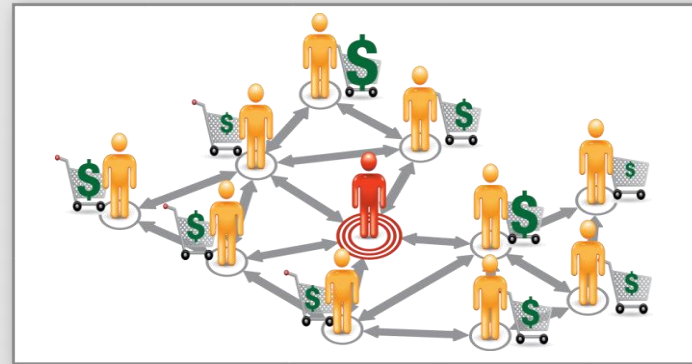
время - деньги



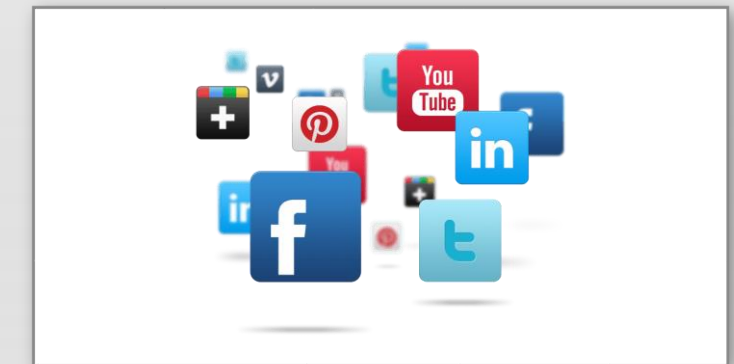
больше отдачи за меньшие средства



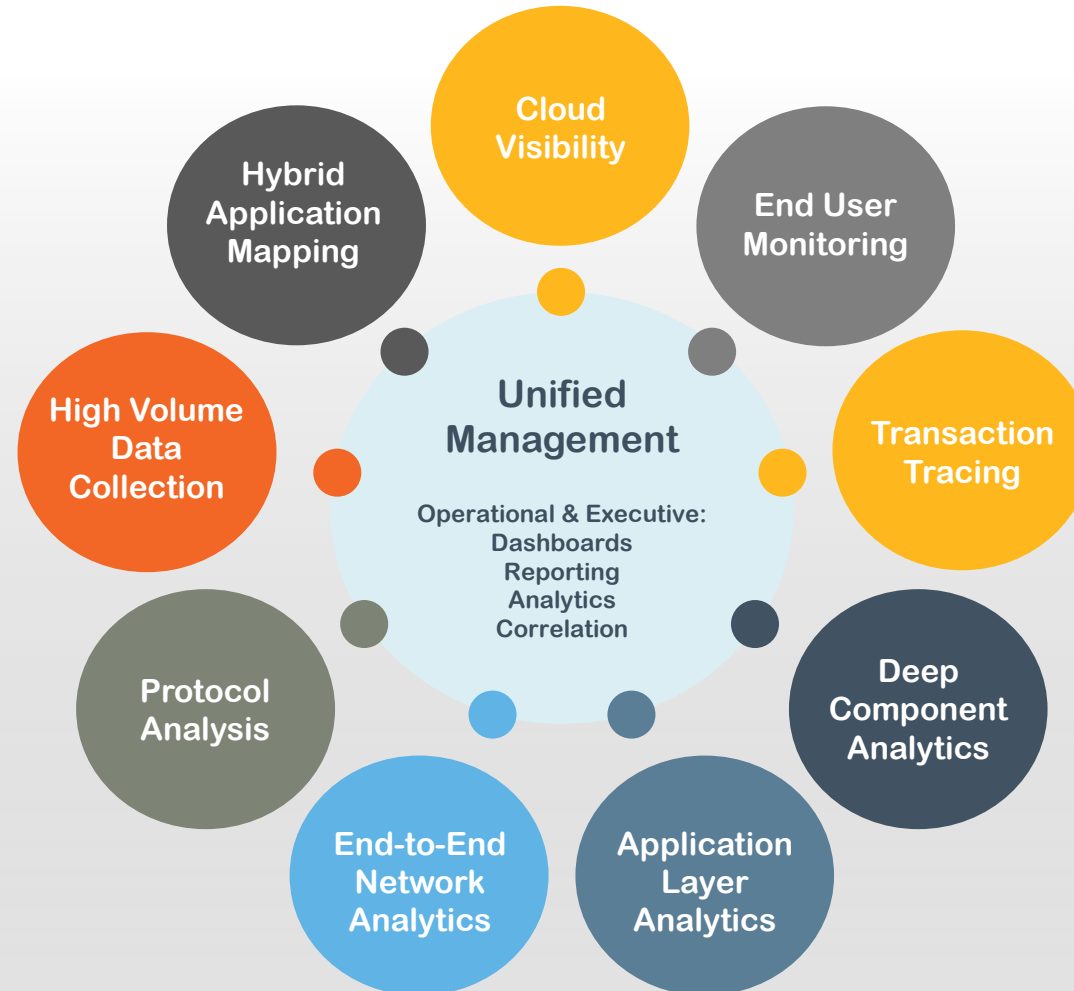
Возрастающие ожидания



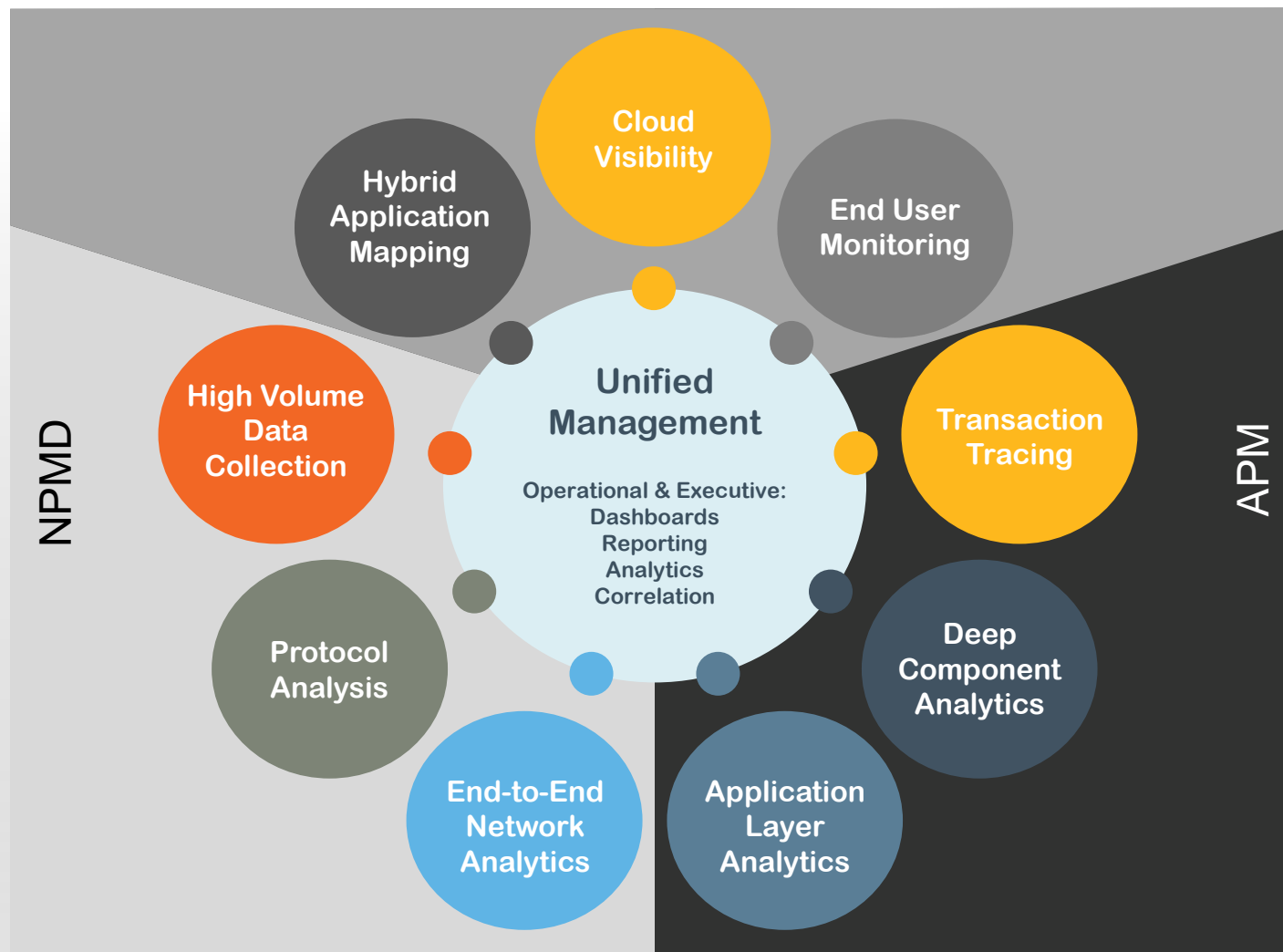
мгновенно публикуемые проблемы



# Категории целостного подхода мониторинга производительности



# Классы инструментов для целостного подхода





IT Ops



Network Ops



App Ops



DevOps



LOB

# Unified Performance Visibility

Single Performance Management Interface

APPLICATION FOCUS

Real-Time, Continuous, High-Definition Data Capture and Analysis

NETWORK FOCUS

ALL Networks  
ALL Applications



Switch



Router



Packets



SH/SF



Devices



Web Server



App Server



Database



Applications

Comprehensive Data Capture

# SteelCentral: Your Command Center for Application Performance

Мониторинг конечного  
пользователя

Картография приложений

Глубокий анализ  
компонент приложения

Мониторинг Сети,  
Разбор Пакетов,  
Анализ Поточков



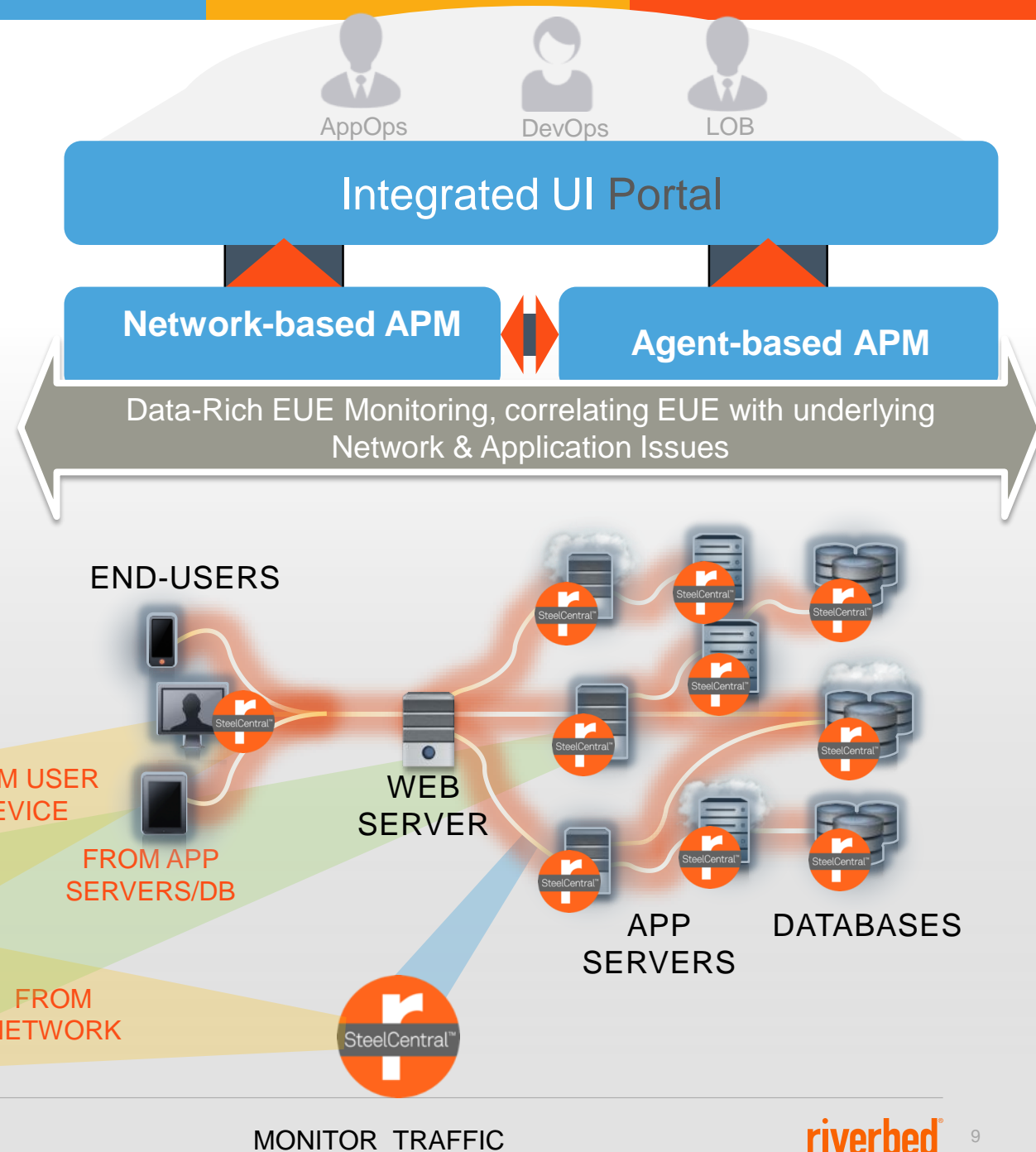
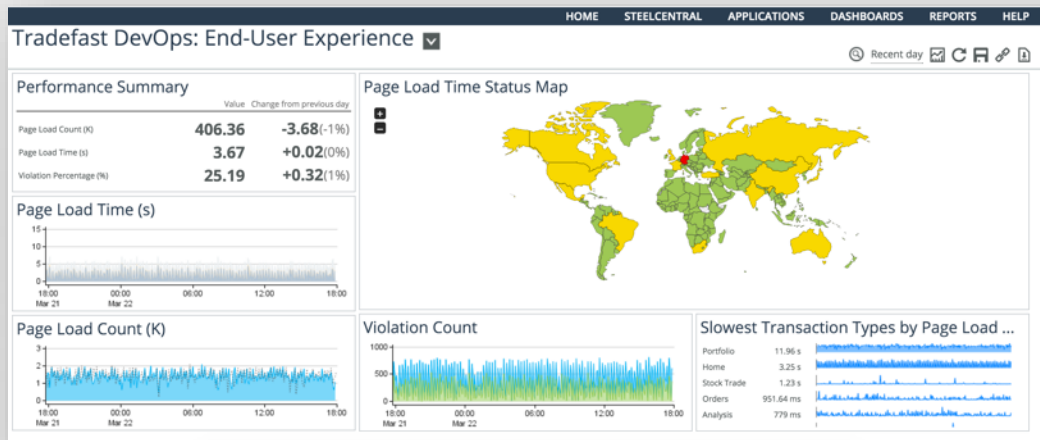
# EUE Monitoring Solution with SteelCentral

## Leave no user behind

Understand user satisfaction by geography, browser or device, and expose issues before users complain

## Troubleshoot problem down to the root cause

Diagnose issues and arm the right teams – app, network or infrastructure – with diagnostics they need to fix the issue



# EUE Device-based Monitoring with SteelCentral

AppOps

DevOps

LOB

CIO

CMO/CEO

Integrated UI Portal

Network-based APM

Agent-based APM

Device-based APM

*EU Device Based Monitoring*

*EUE & App Performance Monitoring of SaaS & packaged apps (e.g. O365, SAP GUI, Oracle, Citrix Think Client)*

*Workforce Productivity Monitoring for every user in every location*

END-USERS

WEB SERVER

APP SERVERS

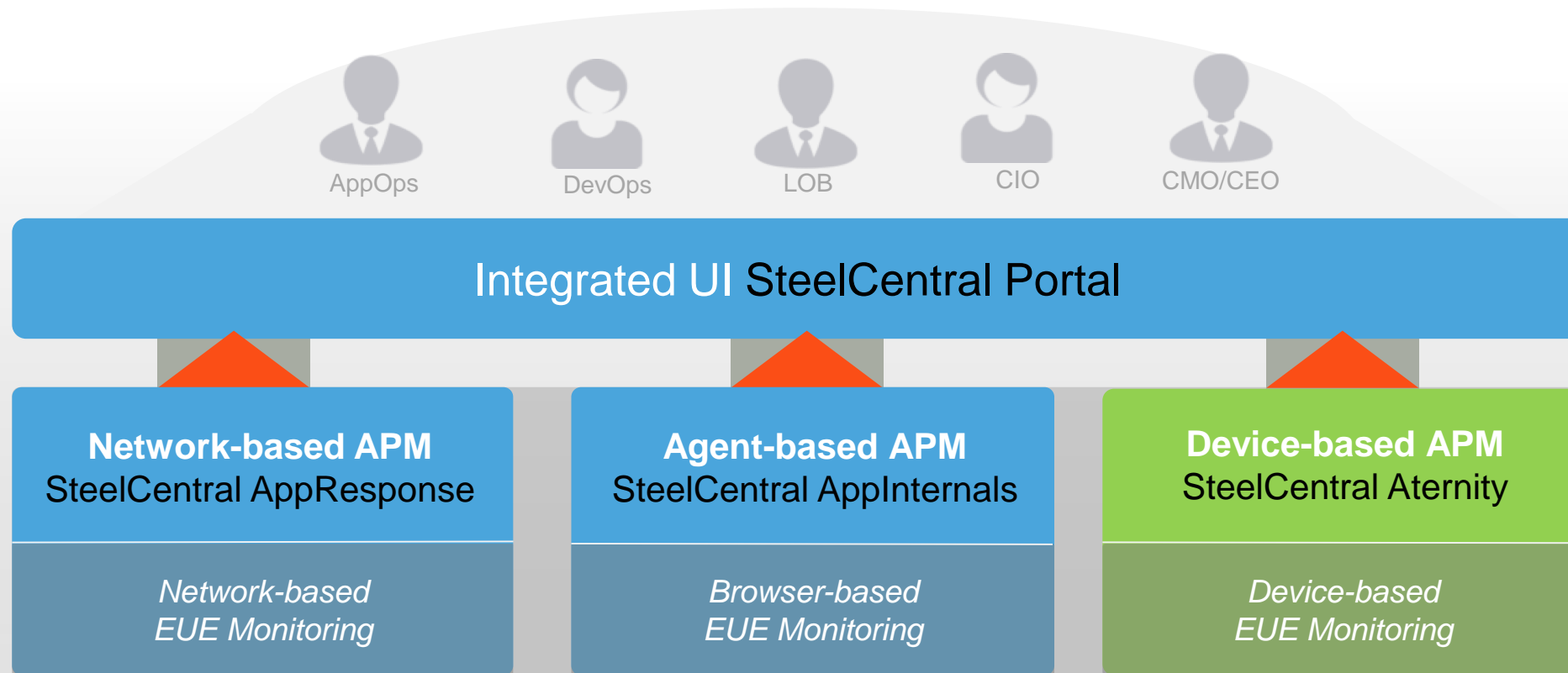
DATABASES

SteelCentral™

MONITOR NET TRAFFIC



# The most advanced EUE monitoring solution in the market



***SteelCentral EUE Monitoring Solution***



# Найдём Решение за Минуты

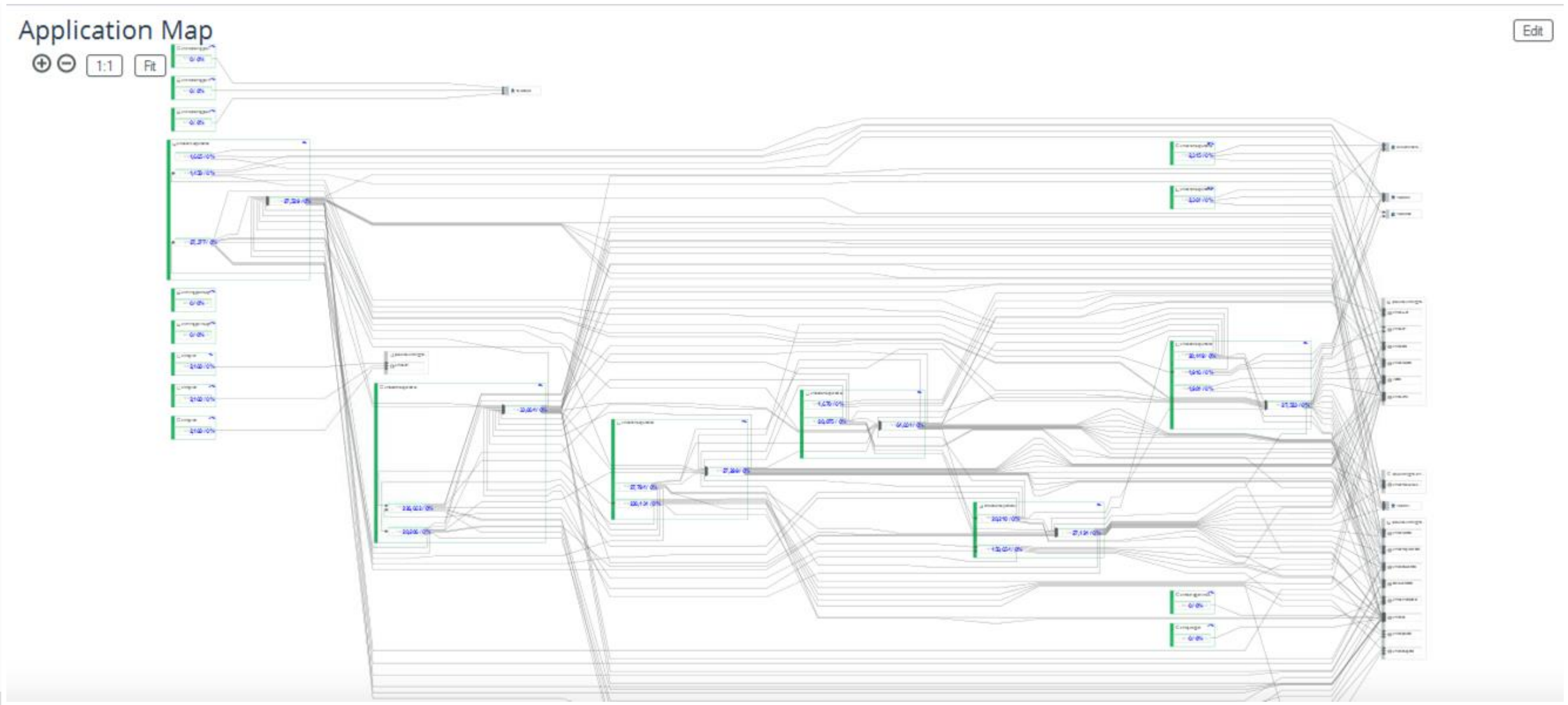
ВМЕСТО ЧАСОВ, ДНЕЙ, НЕДЕЛЬ...

**riverbed**<sup>®</sup>

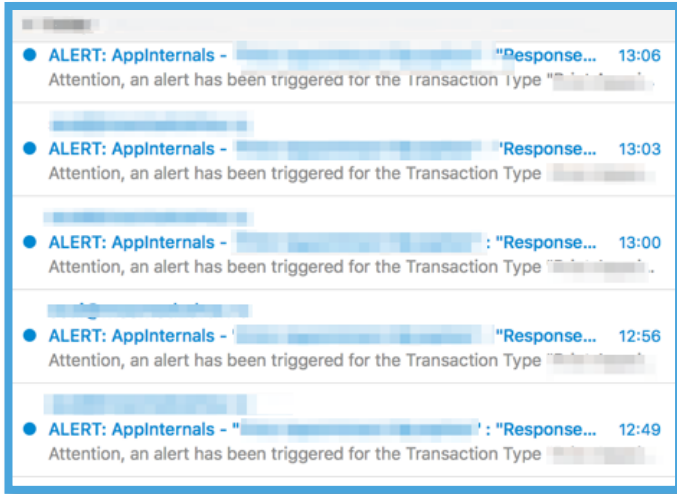
# С чего всё начиналось у заказчика

- **Отсутствует представление** о производительности приложения
- **Анализ отказов** требует много времени (MTTR)
- Проблемы решаются **заменой оборудования** (неоправданные инвестиции)
- **Постоянные жалобы** клиентов ПО
- **Перебрасывание ответственности** между командами
- **Сложности в общении** с разработчиками

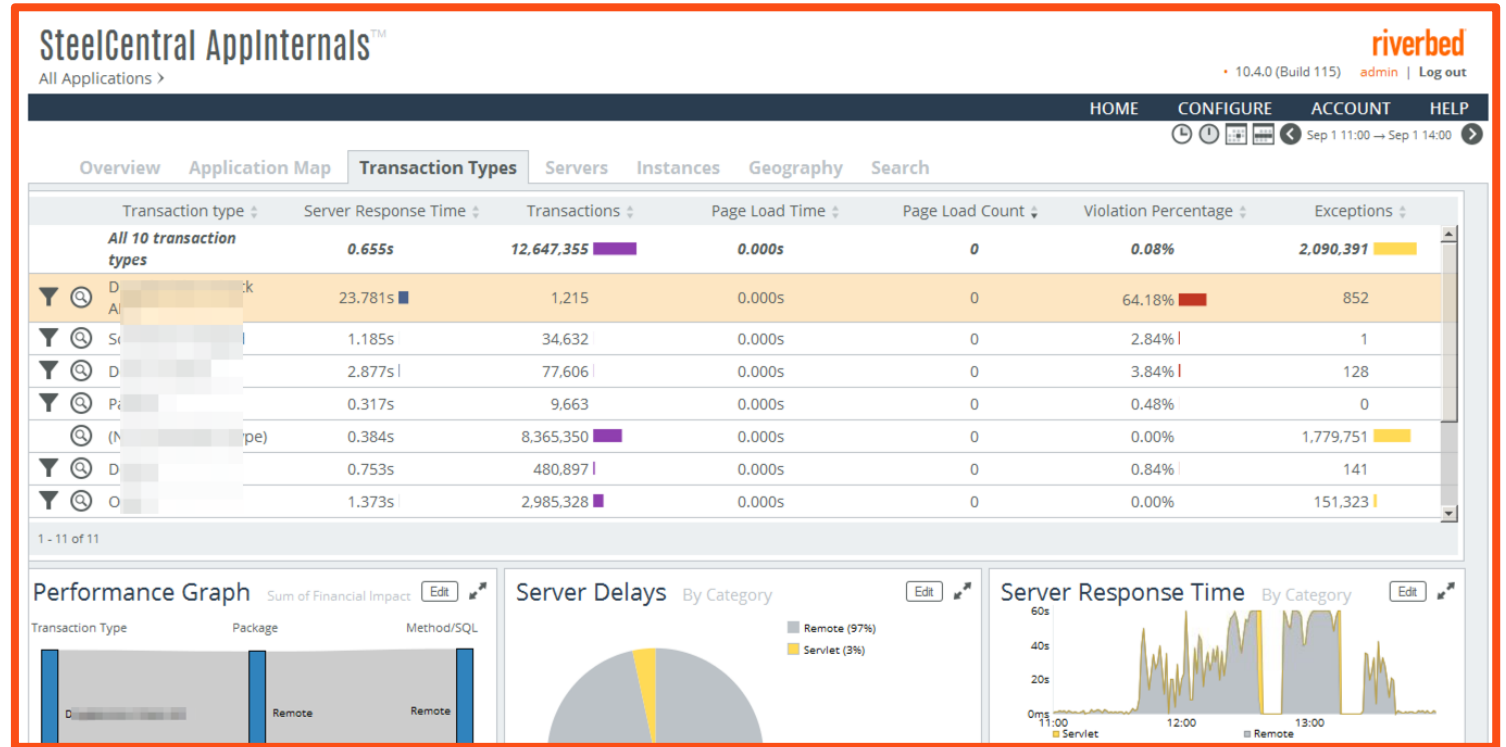
# А это как выглядит их инфраструктура



# Проблема с сервисом “DD Check” – «подозреваемый»

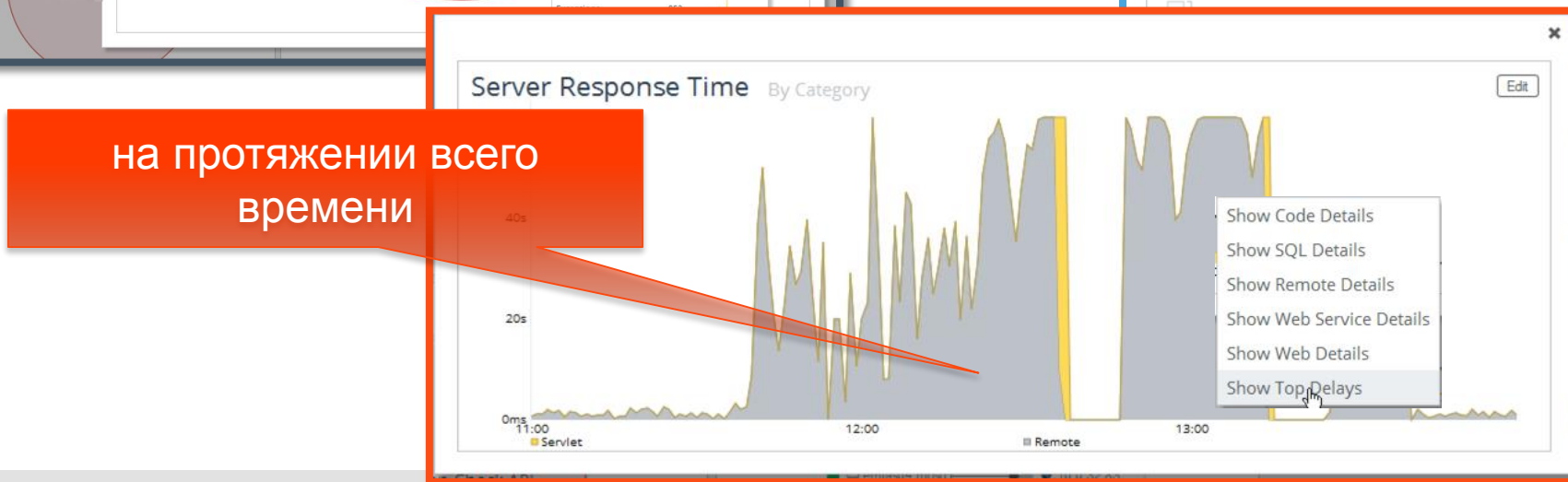
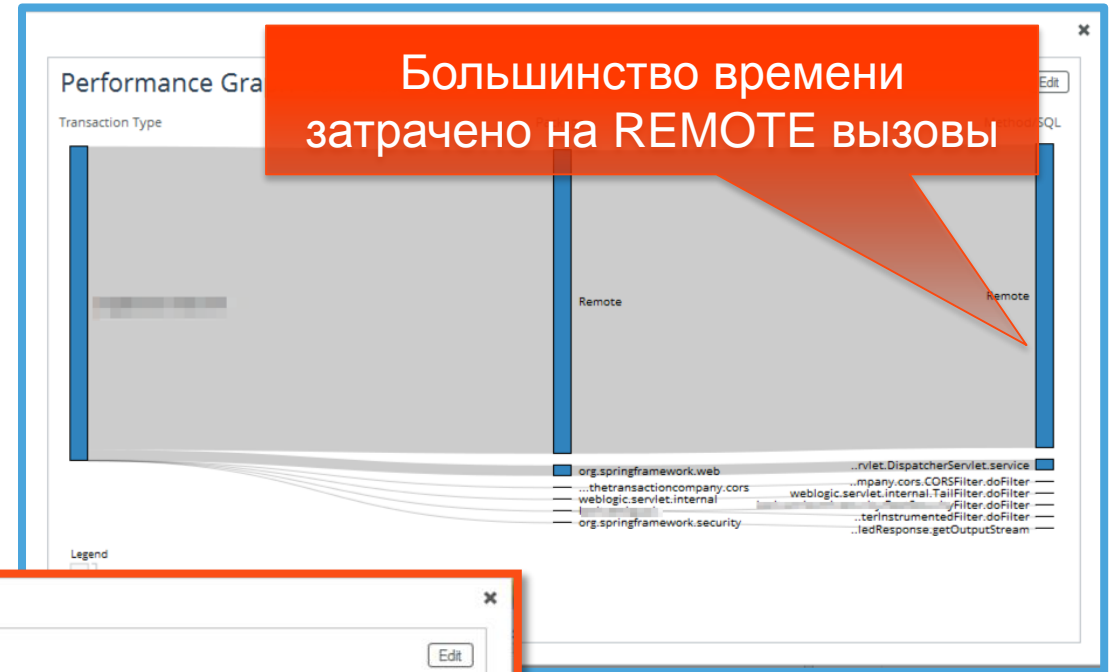
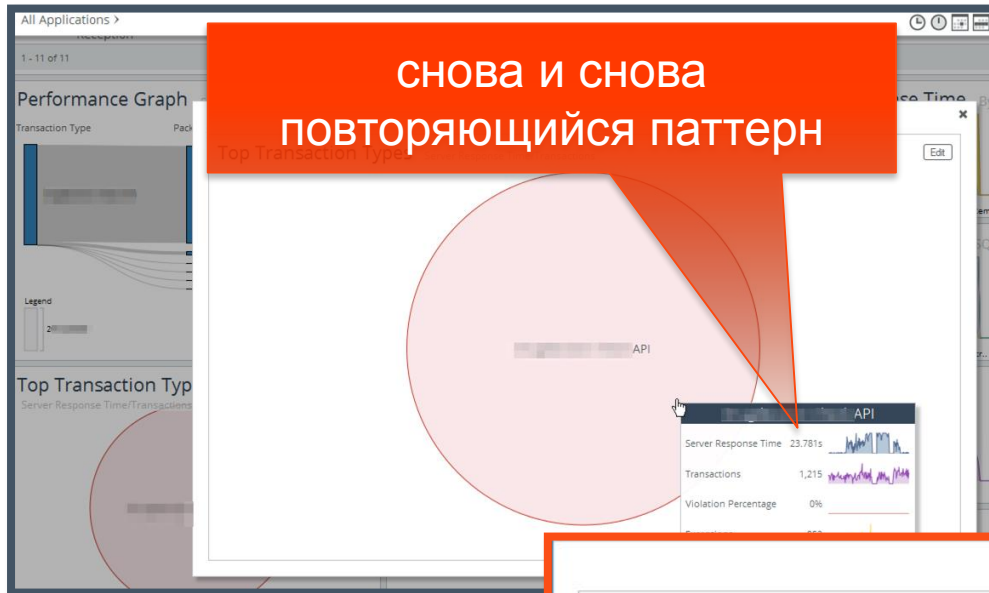


1. Уведомления об увеличенном времени отклика



2. Начало анализа проблемы с сервисом „DD Check API“

# Расследование проблемы с методом





Методы, где было затрачено  
большинство времени на всех  
транзакциях с использованием  
«подозреваемого»



Total Processing Time (s)	Processing Time/call (s)	Maximum Processing Time (s)	Method
12,196.36	16.20	1,034.05	weblogic.wsee.jaxws.JAXWSJbServlet.service
10,488.57	31.12	1,033.83	DrugDecisionSupportService_37dd6s_Impl.addDrugsCacheOfServiceVLS
10,347.88	30.98	1,033.83	DrugDecisionSupportService_37dd6s_Impl.fastCheckDrugsInteraction
9,892.96	29.44	1,033.83	DrugDecisionSupportService_37dd6s_Impl.log
9,495.37	12.69	947.57	com.sun.xml.ws.server.sei.SEIInvokerTube.processRequest
8,594.87	11.31	18.11	permissionBean_rrktmo_Impl.getLpuPermissionListByLpuExternalId
3,448.03	3.50	18.07	permissionBean_rrktmo_Impl.getBenefitCategoriesByBenefitGroup
2,989.05	7.72	18.04	registryBean_swnj1i_Impl.listBenefits
2,638.84	7.00	18.06	registryBean_swnj1i_Impl.getPatient
1,265.98	4.03	18.11	DrugDecisionSupportBean_19vk4g_Impl.getPrescriptionsRowBy
297.06	11.43	17.05	prescriptionBean_4ngd7w_Impl.getPatient
195.57	13.97	18.06	interactionLogBean_bxrbpg_Impl.registerInteractionLog
179.04	12.79	16.28	prescriptionLookupBean_8odr5k_Impl.getPharmacyActual
177.81	11.85	17.12	MIASObjectsBean_4ewri_Impl.getAPU
132.94	9.50	17.20	MIASObjectsBean_4ewri_Impl.getDoctor
100.61	0.01	1.03	javax.xml.rpc.internal.RmiDataSource.getConnection
77.36	12.89	17.06	prescriptionBean_4ngd7w_Impl.listPrescriptions
61.32	8.76	15.12	patientBean_17lcdc_Impl.setUpdateStatus
60.10	15.02	15.04	freeFoodServiceBean_ij4ixs_Impl.findQuotaById
48.59	6.94	15.67	registryBean_swnj1i_Impl.changePatientHistory

SupportBean

Analysis

Search

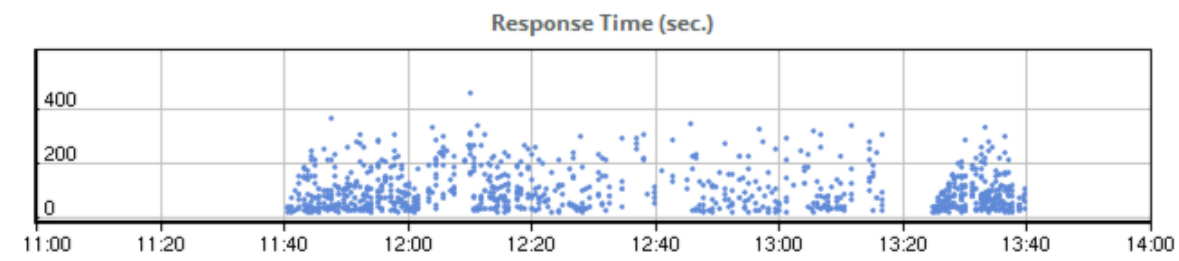
Add Criteria >> Show the top 1000 Slowest End-to-End Transactions For context (optional)  Apply Global Filters

Refine Results >>

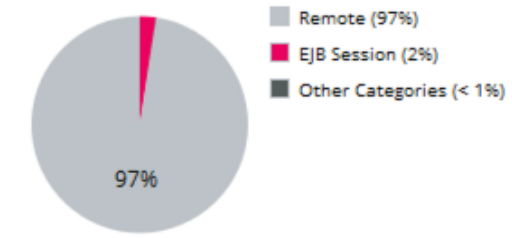
- User**
  - 300s anonymous (983)
  - 457s unknown (17)
- User IP**
  - 300s 10.0.32.83 (983)
  - 457s N/A (17)
- URL Path**
  - 300s .ug... (983)
  - 457s N/A (17)
- Transaction Type**
  - 300s (983)
  - 457s N/A (17)
- Server**
  - 457s (1000)
- Region**
  - 457s N/A (1000)

## Top 1,000 Slowest Matching Transactions

Share



### Summary of Server Delays



Search Results >>

## Matching Transactions

Edit

Response Time	Completion Time	Transaction Type	Exceptions	Start Time	User IP	User	User XFF IP	Server	Instance	URL Path
457.259s	12:09:52			12:02:15	unknown				Weblogic_e...	

SupportBean | histogram

Analysis

Search

Add Criteria >> Show the top 1000 Slowest End-to-End Transactions For context (optional) Apply Global Filters

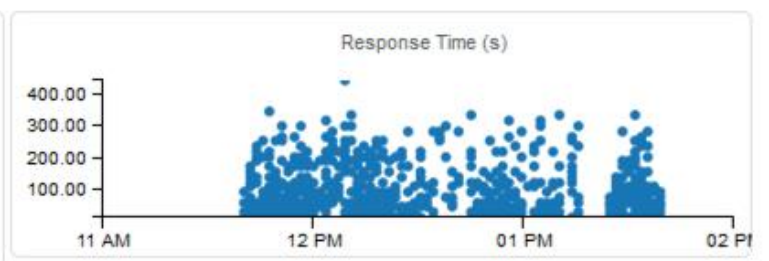
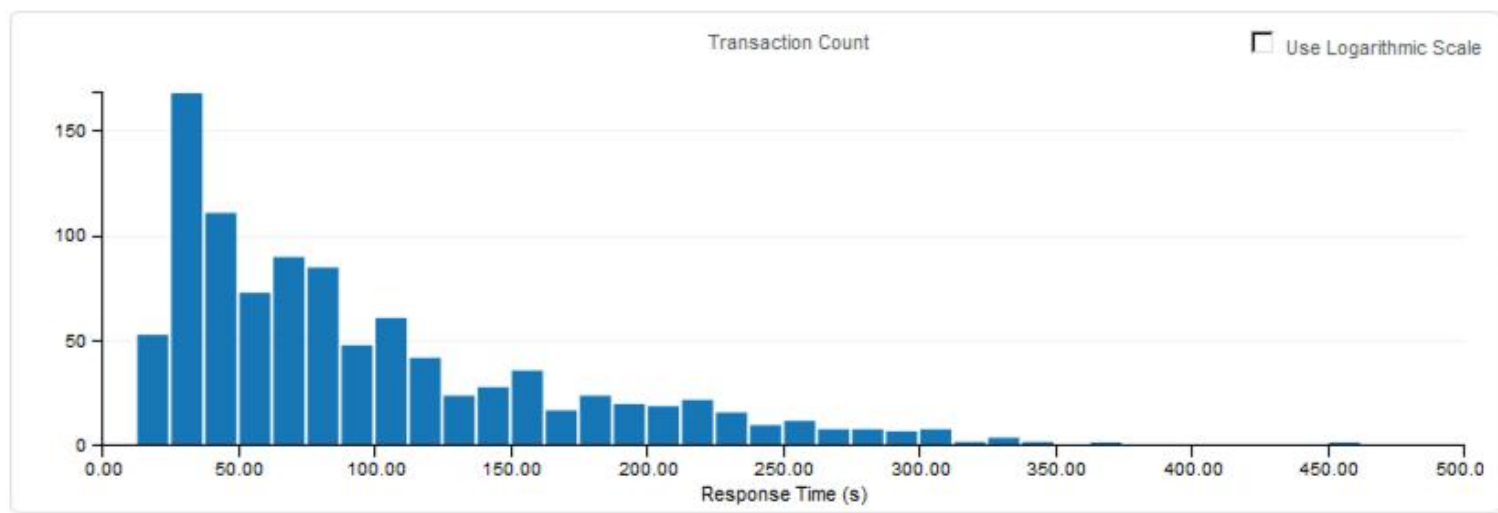
# Histogram

Interactive histogram of response times for top matching transactions. Filter the data by dragging over the histogram and response time charts or by selecting bars in the charts below.

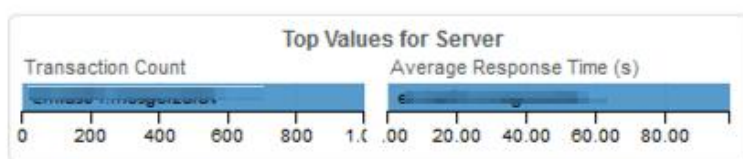
Search: (r SupportBean) | histogram

1,000 of 1,000 transactions selected. Clear Selection.

Related Searches



Sort By: Transaction Count Show: 5



Увеличенное время отклика 457 Sec.

OVERVIEW | **URLS** | TOP CALLS | CALL TREE

Overview

URL

Page Load Time

Server Response Time 457.259s

Exceptions

HTTP Status 200

User

User IP

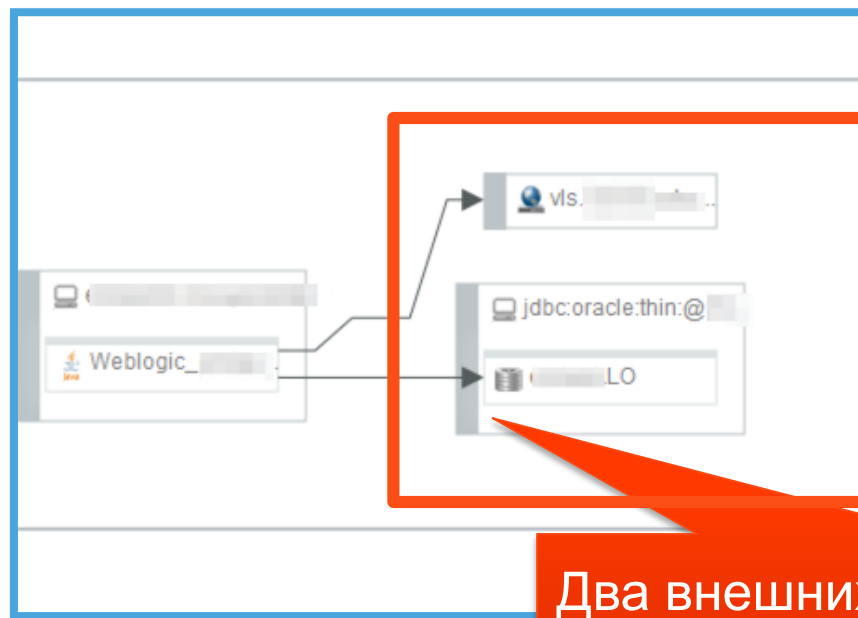
Location

Page Title

Transaction Type

Summary

- The **slowest** back-end tier was **Weblogic\_** (100%)



Два внешних обращения

- 3rd party
- Oracle Database

OVERVIEW | **URLS** | TOP CALLS | CALL TREE | EXCEPTIONS | SQL | ENVIRONMENTAL PERFORMANCE | AJAX | RESOURCES

Outbound URLs

Duration	URL
172.776s	http://vls. .... ?ajax=wsdl-v2&getFile=1
104.947s	http://vls. .... drawwindow.php?ajax=wsdl-v2&getFile=1
179.479s	http://vls. .... ?ajax=wsdl-v2&getFile=1

Top Calls

Total Active Time	Number of Calls	Class	Method	Category
457.222s	4	java.net.SocketInputStream	read	Remote
0.037s	1	...supportBean_19vk4g_impl	getPrescriptionsRow	EJB.Session

Remote Calls

Active Time	Requesting Server	Requesting Instance	Requesting Port	Remote Address	Bytes Sent	Bytes Received
0.020s	...	Weblogic_...	51458	...:1521	0	573

• обращение к 3rd party «украло» большинство времени

'http://vls. ... wsdl-v2&getfile=1' | histogram

Analysis

Search

Add Criteria >> Show the top 1000 Slowest End-to-End Transactions For context (optional)

• Отбор всех транзакций где происходит обращение к 3rd party сервису

### Refine Results >>

#### User

300s anonymous (668)  
457s unknown (332)

#### User IP

300s (68)  
457s N/A (332)

#### URL Path

300s (668)  
457s N/A (332)

#### Transaction Type

300s (668)  
457s N/A (332)

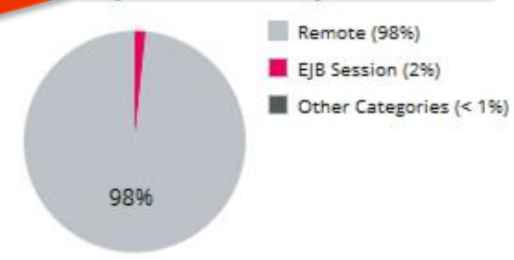
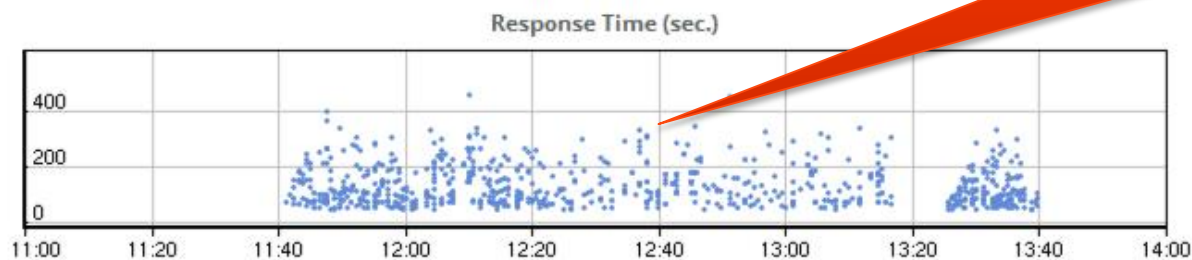
#### Server

457s (1000)

#### Region

457s N/A (1000)

## Top 1,000 Slowest Matching Transactions



### Search Results >>

## Matching Transactions

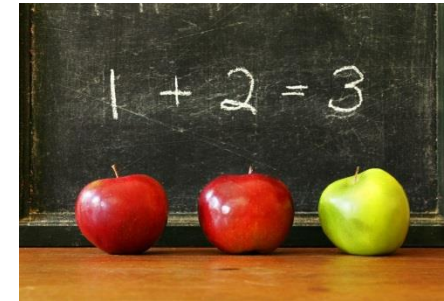
Response Time	Completion Time	Transaction Type	Exceptions	Start Time	User IP	User	User XFF IP	Server	Instance	URL Path
457.259s	12:09:52			12:02:15		unknown			Weblogic_...	

- Connection pool был сконфигурирован только для 20 одновременных подключений

Occurrences	Exception	Class	Method	Server	Instance
1	weblogic.jdbc.extensions.PoolLimitSQLException: weblogic.common.resourcepool.ResourceLimitException: No resources currently available in pool [redacted] DataSource to allocate to applications, please increase the size of the pool and retry..	weblogic.jdbc.common.internal.RmiDataSource	getConnection	[redacted]	Weblogic_e[redacted]
3	weblogic.jdbc.extensions.PoolLimitSQLException: weblogic.common.resourcepool.ResourceLimitException: Configured maximum limit of (20) on number of threads allowed to wait for a resource reached for [redacted] DataSource	weblogic.jdbc.common.internal.RmiDataSource	getConnection	[redacted]	Weblogic_e[redacted]

# Итог

- Инфраструктура к проблеме **НЕ Причастна** от слова совсем
- **Обращение к 3rd Party сервису** являлось основным источником замедления
- **Connection pool** слишком мал для обработки таких долгих запросов
- **Решение** потребовало **минуты** вместо часов



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