

MEET PERFORMANCE EXPECTATIONS

MONITOR & MANAGE PRODUCTION LIFERAY WITH DYNATRACE & OTHERS

Samuele Benetti, Senior System Architect

Performance expectations

Performance: unico significato ma diverse interpretazioni

Definire quali sono le aspettative

Valutare le aree di intervento

Usare una terminologia corretta e comune per soddisfare le aspettative

Governance

Performance

Capacity

Stability

Organization

Governance

Performance	> Performance
Capacity	Valutare in base alle risorse disponibili le prestazioni dei sistemi
Stability	Si raggiunge con fasi di stress test dell'architettura in ambiente di
Organization	preproduzione e un monitoraggio attivo dei tempi di risposta di alcune aree considerate business critical

Governance

Performance

Capacity

Stability

Organization

> Capacity

E' la quantità di richieste che il sistema riesce ad evadere adeguatamente all'interno di una fascia temporale definita

E' un valore approssimato con un grado di attendibilità che dipende dal monitoring e dall'infrastruttura. Parlare di capacity implica correlare il concetto di performance e stability con qualità del prodotto.

Governance

Performance

Capacity

Stability

Organization

> **Stability**

Monitoring attivo e puntuale e punta a rendere il sistema stabile

Penetration test periodici

Valutazione del patching protocol (patch + fix + enhancement) sia in ambito sistema operativo (ssl, kernel, lib so, ecc...) che applicativo (liferay, java, tomcat, apache, database ecc...) che infrastrutturale (vmware, switch, san, ecc)

Governance

Performance

Capacity

Stability

Organization

> Organization

Implementare delle «**check list of activities**» e definire un «**workflow managment**» attraverso degli strumenti di «**workflow management systems**» significa: incrementare l'efficienza, un miglior controllo dei processi e maggior flessibilità che alla fine si traducono in qualità del prodotto.

Performance

Liferay has benchmark performance

Liferay's performance

Liferay is optimized

but...

The goals of this study were to:

- Determine the maximum number of virtual users supportable by a single physical server across defined test cases.

- Determine

- Provide st

- Partners i

To help accu

- 1,000,000

- 2,000,000

- 10,000 sit

- 4,000,000

We first examine Liferay's performance

These portlets are extremely fast, lend

Table 1 illustrates the performance ob

less than 200ms as we approach the p

we have a mean time (μ) of 66.5ms an

performance point with relatively sma

virtual users.

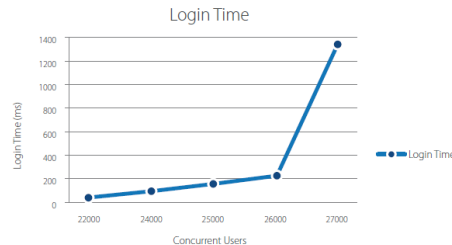
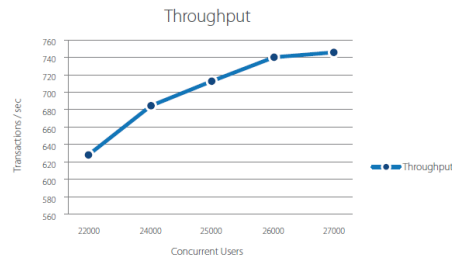


Figure 2: Mean Login Time

During peak load, the portal has an optimal throughput for the login transaction of 744 transactions per second.

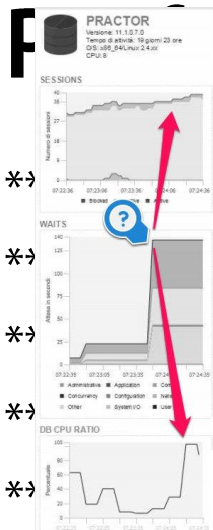


Causes of Java Performance Problems

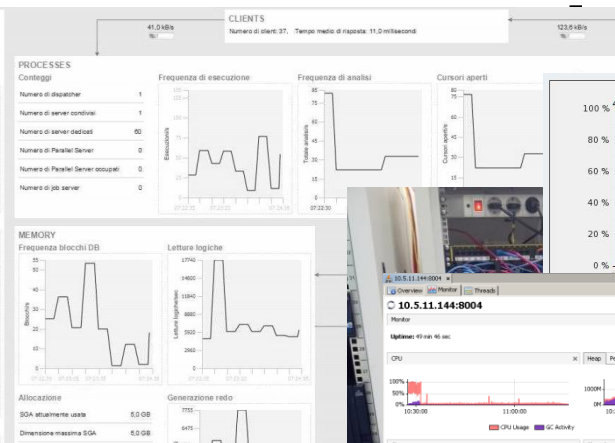
- ** dimensionamento e configurazione errato della jvm
- ** jvm garbage collection
- ** dimensione dei pool verso il backend
- ** codice personalizzato non scritto secondo le best practices
- ** utilizzo del database
- ** assenza di strumenti di monitoraggio --> indagine troppo ampia
- ** hardware o infrastruttura insufficiente rispetto alle aspettative o all'utilizzo
- ** networking

Performance resolution

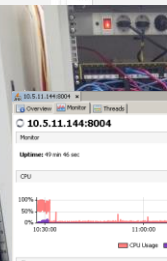
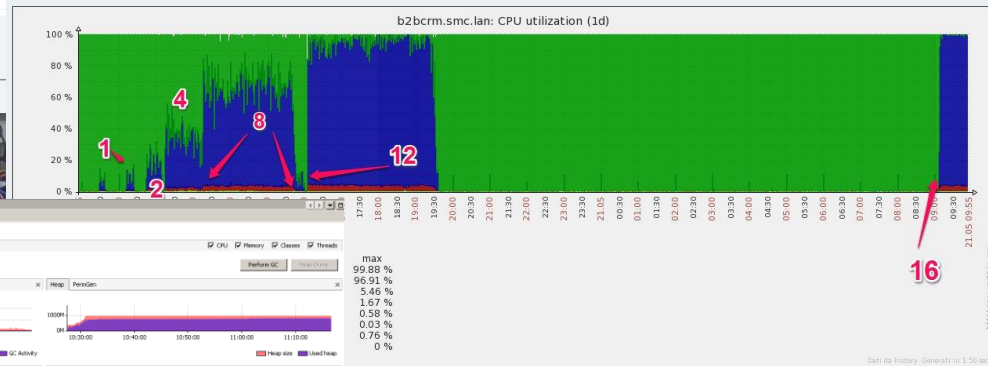
- ** analisi delle aspettative (realistiche)
- ** analisi delle componenti hardware
- ** definire il disegno architetturale
- ** verifica l'aderenza delle best practices sui sistemi operativi e su Liferay
- ** verificare la possibilità di utilizzare strumenti specifici di monitoraggio
- ** analisi dettagliata con strumenti di tuning come: operation manager, zabbix, rhq, probe, javamelody, yourkit, AppDynamics, DynaTrace, Wily interscope, jvisualvm, jmx, jstat, jstack, jmap, ecc...



** analisi di
probe, java
jstat, jstack



ition



10 total, 1 running, 989 sleeping, 0 stopped, 0 zombie
5.1kvar, 1.7kay, 0.0hni, 32.3kld, 0.7kwa, 0.0hli, 0.2kai, 0.0kac
16083M total, 15714M used, 369M free, 168M buffers
32957M total, 494M used, 32462M free, 10746M cached

ES	PR	NI	VIRT	RES	SWP	S	%CPU	MEM	TIME+	COMMAND
ot	20	0	56340	9860	2916	S	10	0.1	9:28.02	ltop
acle	20	0	5301m	143m	141m	S	9	0.9	0:00.26	oracle
acle	20	0	5303m	76m	72m	S	8	0.5	0:00.48	oracle
acle	20	0	72416	20m	11m	S	7	0.1	0:00.39	fglrun-bin
acle	20	0	5302m	129m	125m	S	4	0.8	0:00.56	oracle
ot	20	0	9688	2188	880	S	4	0.0	2:26.66	top
mun12	20	0	72784	20m	11m	S	2	0.1	0:00.51	fglrun-bin
acle	20	0	9436	1936	872	R	2	0.0	0:00.45	top
mun12	20	0	66432	15m	10m	S	2	0.1	0:00.05	fglrun-bin
acle	20	0	5301m	23m	20m	S	1	0.1	0:00.03	oracle
acle	20	0	86160	12m	8896	S	0	0.1	12:35.81	tmshlcr
acle	20	0	5315m	85m	54m	S	0	0.3	40:14.06	oracle
acle	20	0	5300m	111m	110m	S	0	0.8	21:05.10	oracle
ot	20	0	93520	3812	2924	S	0	0.0	0:02.26	sshd
stfix	20	0	39816	2212	1736	S	0	0.0	0:00.01	pickup
ector	20	0	64960	13m	9.9m	S	0	0.1	0:00.04	fglrun-bin
1 root	20	0	10376	652	616	S	0	0.0	1:31.40	init
2 root	20	0	0	0	0	S	0	0.0	0:00.09	kthreadd
3 root	RT	0	0	0	0	S	0	0.0	0:03.66	migration/0
4 root	20	0	0	0	0	S	0	0.0	0:23.81	ksoftirqd/0
5 root	RT	0	0	0	0	S	0	0.0	0:19.94	migration/1
6 root	20	0	0	0	0	S	0	0.0	0:15.97	ksoftirqd/1
7 root	RT	0	0	0	0	S	0	0.0	0:02.05	migration/2

Esempio: dynatrace

Unico strumento, tante finalità

Raccoglie dati omogenei e correlabili a 360°

Gestisce gli alert

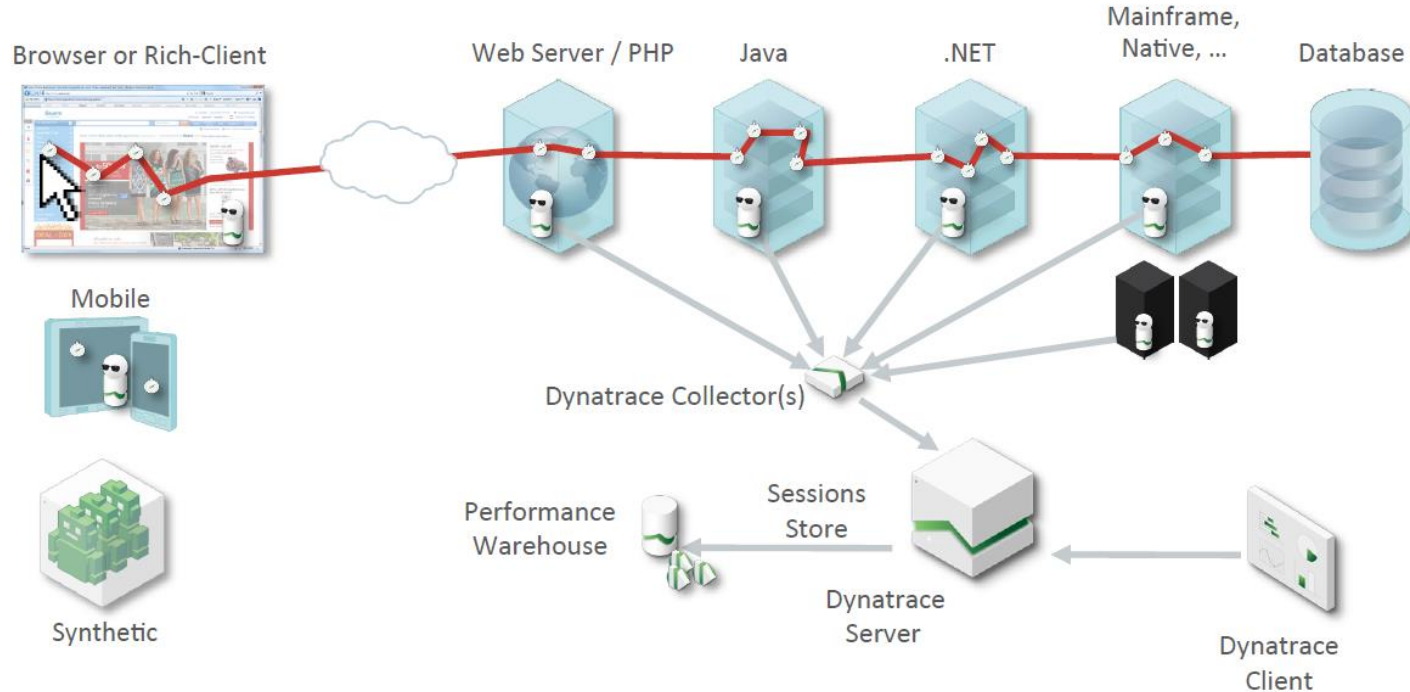
Permette di creare dei kpi

Gestisce metriche di utilizzo (SLA)

Valuta la user experience

Analizza la singola classe java implementata

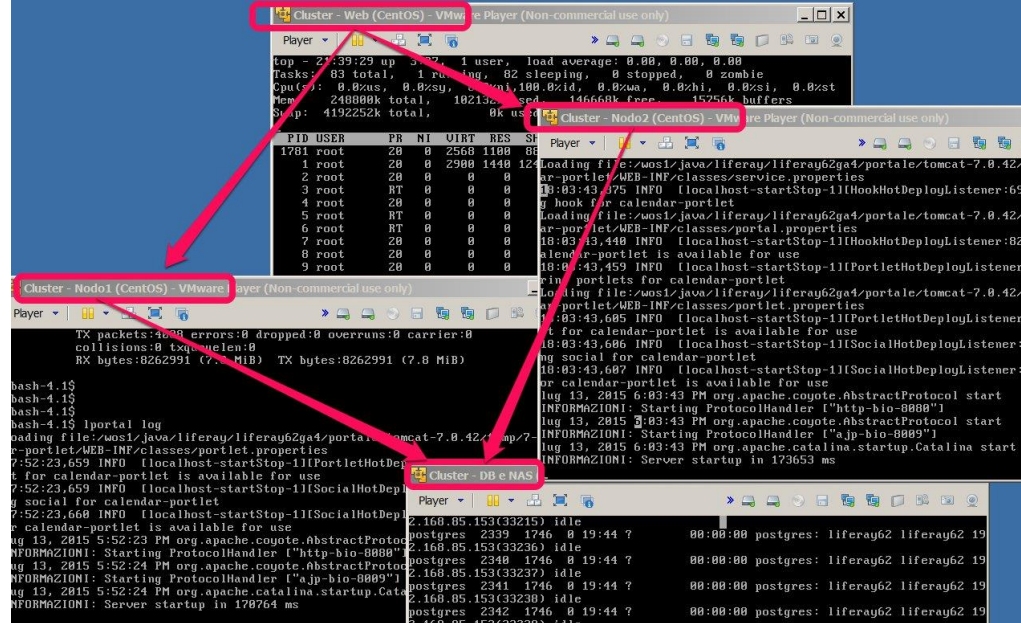
Dynatrace: struttura



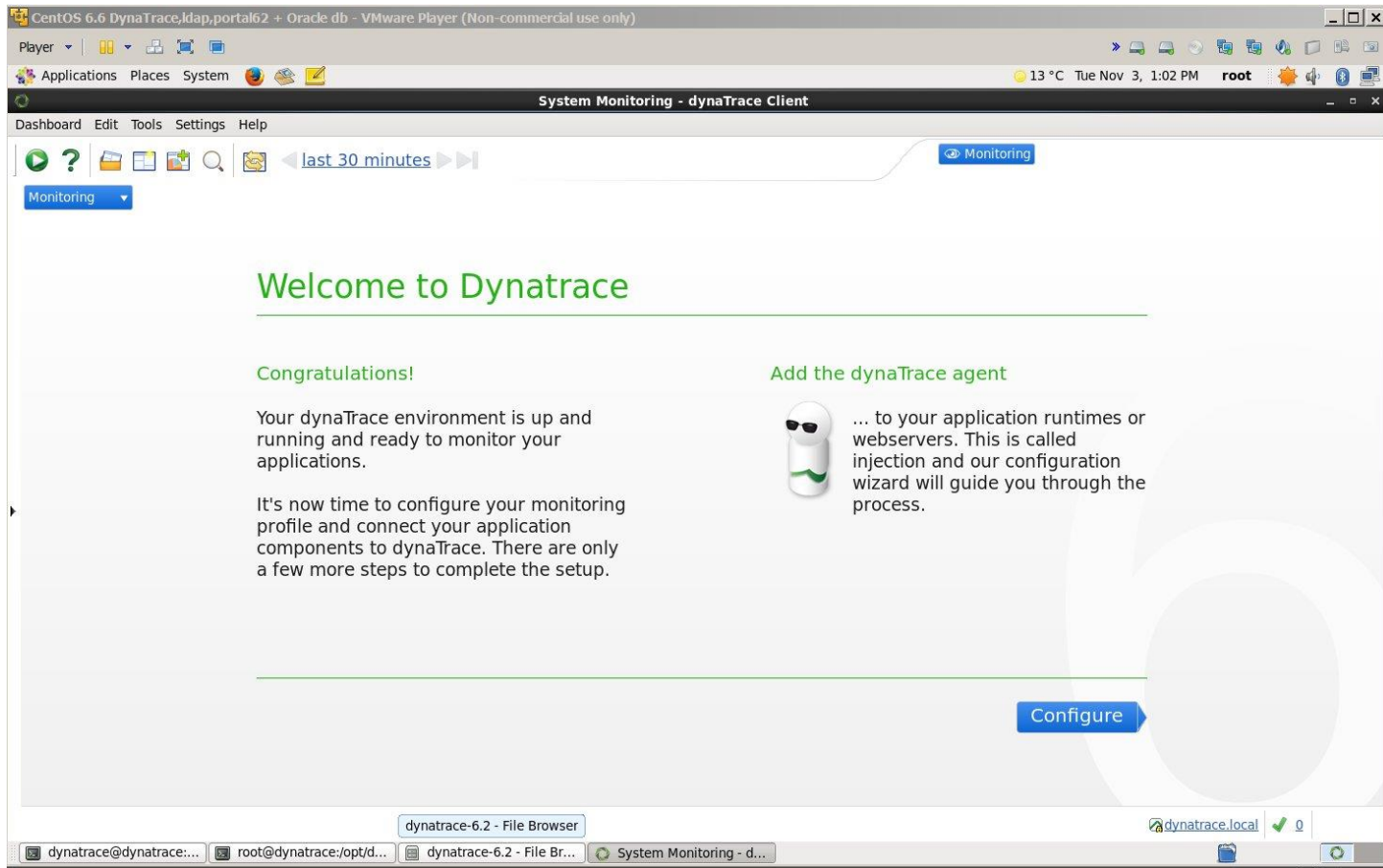
Dynatrace: presentation

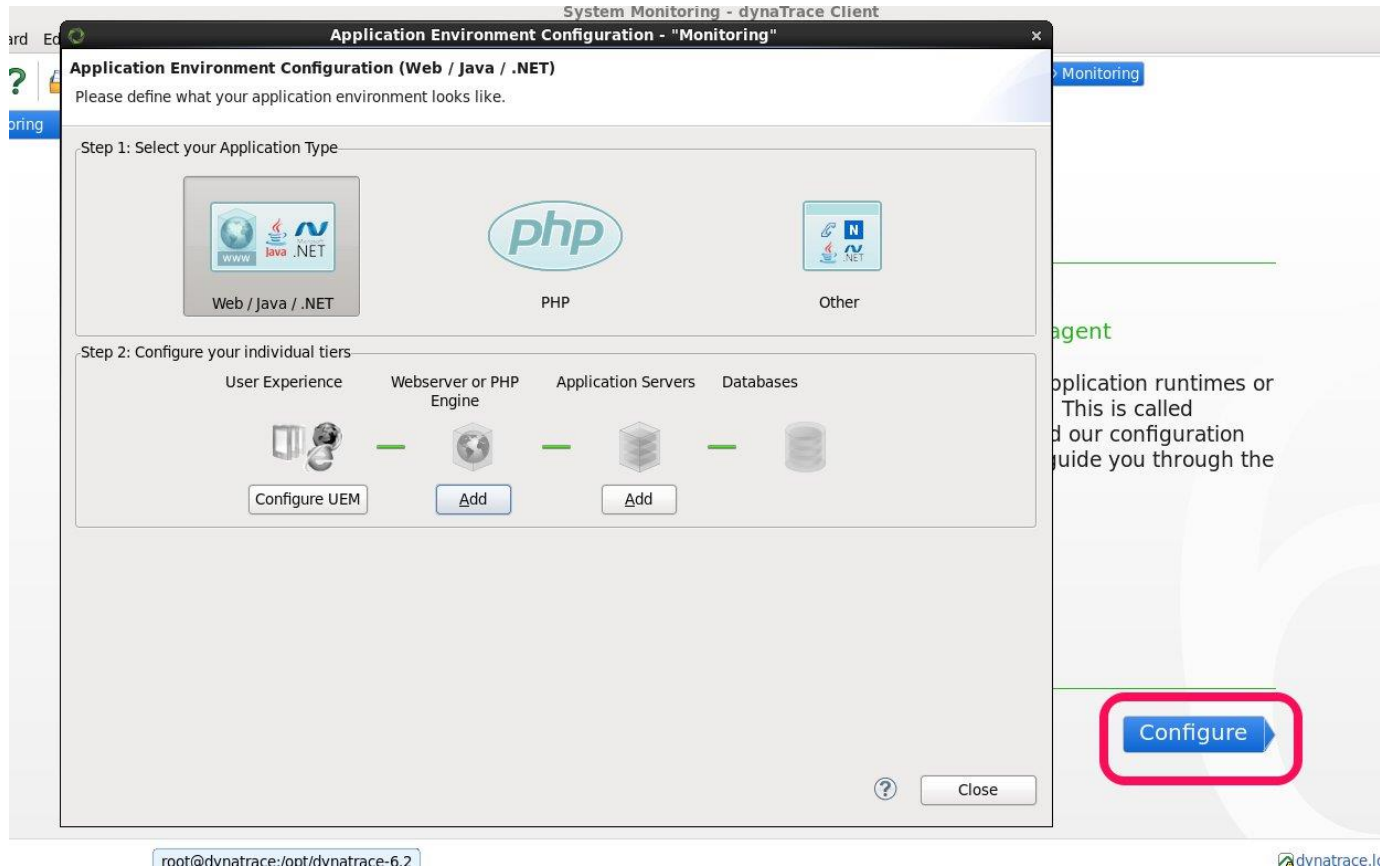
Simulazione con:

- 1 web server apache
- 2 liferay cluster multicast
- 1 db postgresql + DML
- 1 jmeter di test/carico
- 1 server dynatrace



INSTALLATION





What type of tier do you want to create?
Select the type of tier you want to create later.

Type and Name
Type
Application
PHP
PHP
Web Server
Apache
IBM
Microsoft
Google
Oracle
Name your tier
Hint
A descriptive name for your system. All tiers must have a unique name.

Specify the location of the agent
Specify where you want to install the agent.

Where is "Apache" installed?
☐ On this machine
☒ On a remote machine
Which environment?
☒ 32 Bit
☐ 64 Bit

Download and install the agent
The following steps will guide you through the process of downloading and installing the agent.

1. Download
Get the installation package from the dynaTrace website.
2. Install
Switch to your terminal and run the following command:
`./bin/sh dynaTraceAgent-3.2.0-Linux-32bit.tar.gz`

Add the dynaTrace agent to the configuration
The following steps will guide you through the process of adding the dynaTrace agent to the configuration.


Web Server Agent
You must replace the lines with the lines from the dynaTrace agent.
Example path:
The name of the agent
Name Apache
The address of the agent
The address of the dynaTrace agent
Copy to Clipboard

Add the dynaTrace agent to the configuration
The following steps will guide you through the process of adding the dynaTrace agent to the configuration.


Apache Web Server
Add the following lines to the configuration file:
LoadModule dtrace_module modules/mod_dtrace.so
Replace <path> with the path to the dynaTrace agent
In case of trouble, see the documentation.
[Show the dynaTrace agent configuration](#)

Configure Webserver or PHP Engine

Restart your tier
To connect your process to dynaTrace you have to restart it.


Apache1

To connect your agent execute the following manual steps:
1) Restart the dynaTrace Web Server Agent service on your Linux machine
2) Restart your Apache
[Show the dynaTrace online documentation for the Web Server Agent](#)

Connection state
Waiting for your 2 agents to connect ... (this could take up to a minute) 
You don't see agents connecting after following the manual steps?
[Show the dynaTrace online documentation for Apache](#)

?

?

?

?

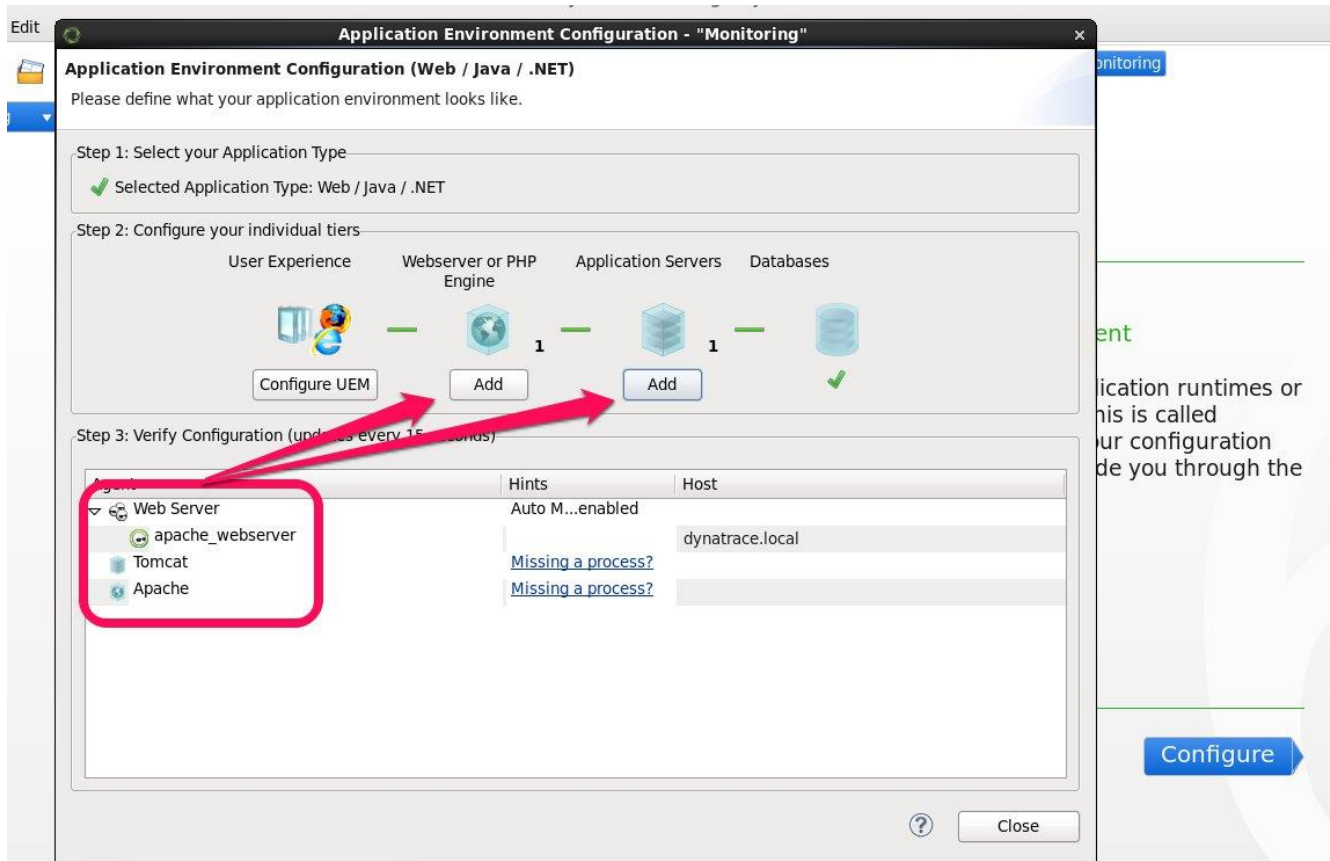
?

?

< Back

Skip

Close



System Monitoring - dynaTrace Client

DashboardEditToolsSettingsHelp

?

last 30 minutes

Monitoring

Monitoring

Topology

Agents Overview

Configure


Welcome to Dynatrace

Congratulations!

Your dynaTrace environment is up and running and ready to monitor your applications.

We have detected connected agents and data collection is active.
To view captured data click on *Start Monitoring* or *Configure* to add more agents.

Analyzing your application



2 Agents connected

35 Transactions analyzed

1 Application detected

Configure

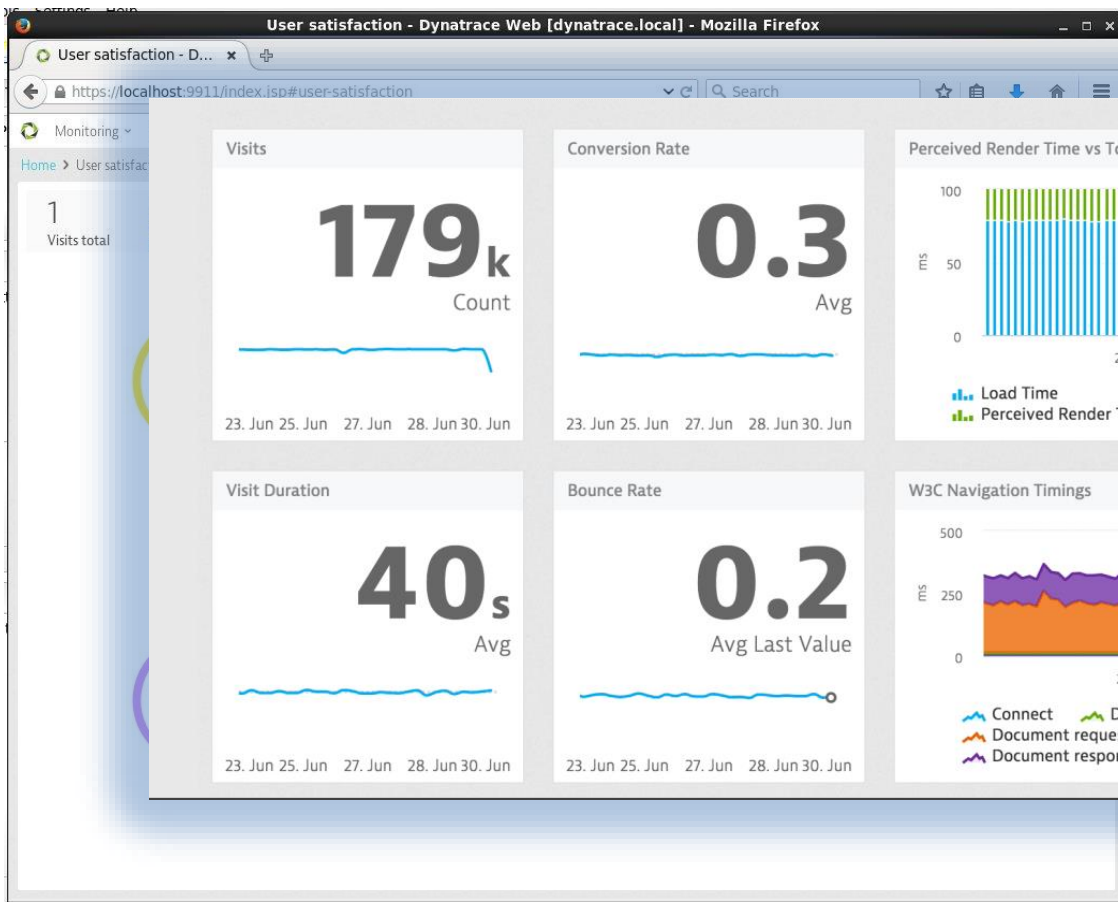
Start Monitoring

dynatrace.local

0

root@corsonodo1:/opt/...root@dynaTrace:/opt/d...dynatrace-6.2 - File Br...System Monitoring - d...Home - Dynatrace We...

USER E USEREXPERIENCES



Visits - System Monitoring - dynaTrace Client

Dashboard Edit Tools Settings Help

Visits - System Monitoring - dynaTrace Client

Dashboard Edit Tools Settings Help

pro

?

📁

📄

🔍

🕒

last 30 minutes

Monitoring *Transaction Flow Dashboard

profile sam

Visits

🔧

🌐

📱

🌍

👤

🔗

🖨

⚙️ Configure

Cockpits

dynatrace.local

Status Overview

System Profile

dynaTrace

Monitoring

profile sam

Session Store

👤

Visits (no grouping)

Selecting a single visit shows a detailed view of its user actions. Grouped visits display average values.

Visit	User Experience	User Actions	Application	Client Family	Client IP	Continent	Country
👤 Visit of 'maria' from Linz, Oberoesterreich, Austr	frustrated	7	easyTravel mobile	Samsung Galaxy S II	7.232.109.166	Europe	Austria
👤 Visit of 'maria' from Linz, Oberoesterreich, Austr	tolerating	8	easyTravel mobile	Samsung Galaxy S II	7.232.109.166	Europe	Austria

User Action	Response Time [ms]	Server Contribution [ms]	Network Contribution [ms]	User Experience	Start-Time	Size	User Actions	Client Errors	Failed Actions
🔄 AppStart easyTravel mobile	10.00	-	-	- satisfied	2014-08-18 11:27:39.950	0	1	0	0
🔄 Display SearchJourneyActivity	8.00	-	-	- satisfied	2014-08-18 11:27:50.656	0	2	0	0
🔄 searchJourney	281.00	19.11	2.89	satisfied	2014-08-18 11:27:53.675	1	3	0	0
🔄 Display LoginActivity	8.00	-	-	- satisfied	2014-08-18 11:27:56.941	0	4	0	0
🔄 DoLogin	2342.00	28.72	2.28	satisfied	2014-08-18 11:27:59.958	1	5	0	0
🔄 Redisplay SearchJourneyActivi...	8.00	-	-	- satisfied	2014-08-18 11:28:05.287	0	6	0	0
🔴 bookJourney	1696.00	1621.46	-	- frustrated	2014-08-18 11:28:08.302	1	7	1	1

2 rows

3 rows found (1 row selected)

dynatrace-6.2 - File Browser

dynatrace.local 0

Visits - System Monitoring - dynaTrace Client

Dashboard Edit Tools Settings Help

Monitoring Visits last 30 minutes

Visits by UserExperience

Selecting a single visit shows a detailed view of its user actions.

Visit

- Satisfied Visits
- Visit from a local network at 192.168.85.1 using Chrome 46.0
- Visit from a local network at 192.168.85.1 using Firefox 41.0

Client Type

Click on the pie to display more details

2 Desktop Browser

User Experience

satisfied	tolerating	frustrated
2	0	0

3 rows found

root@dynatrace:/opt/dynatrace-6.2

dynatrace@dynatrace: root@dynatrace:/opt/d... dynatrace-6.2 - File Br... Home - Dynatrace We... Visits - System Monitoring

Monitoring Visits Response Time Hotspots last 30 minutes

Visits by UserExperience

Selecting a single visit shows a detailed view of its user actions.

Visit

- Satisfied Visits
- Visit from a local network at 192.168.85.1 using Chrome 46.0
- Visit from a local network at 192.168.85.1 using Firefox 41.0

User Action Response

Store Session

Session for 'Monitoring'

Stores the session to the dynaTrace Server

Properties

Name: monitoring sam

Description: stress test case

Timeframe

From: 11/ 3/2015 2:16 PM

To: 11/ 3/2015 2:27 PM

Content

☒ PurePaths and time series

☐ PurePaths

☐ Time series

Options

☐ Lock session to prevent deletion

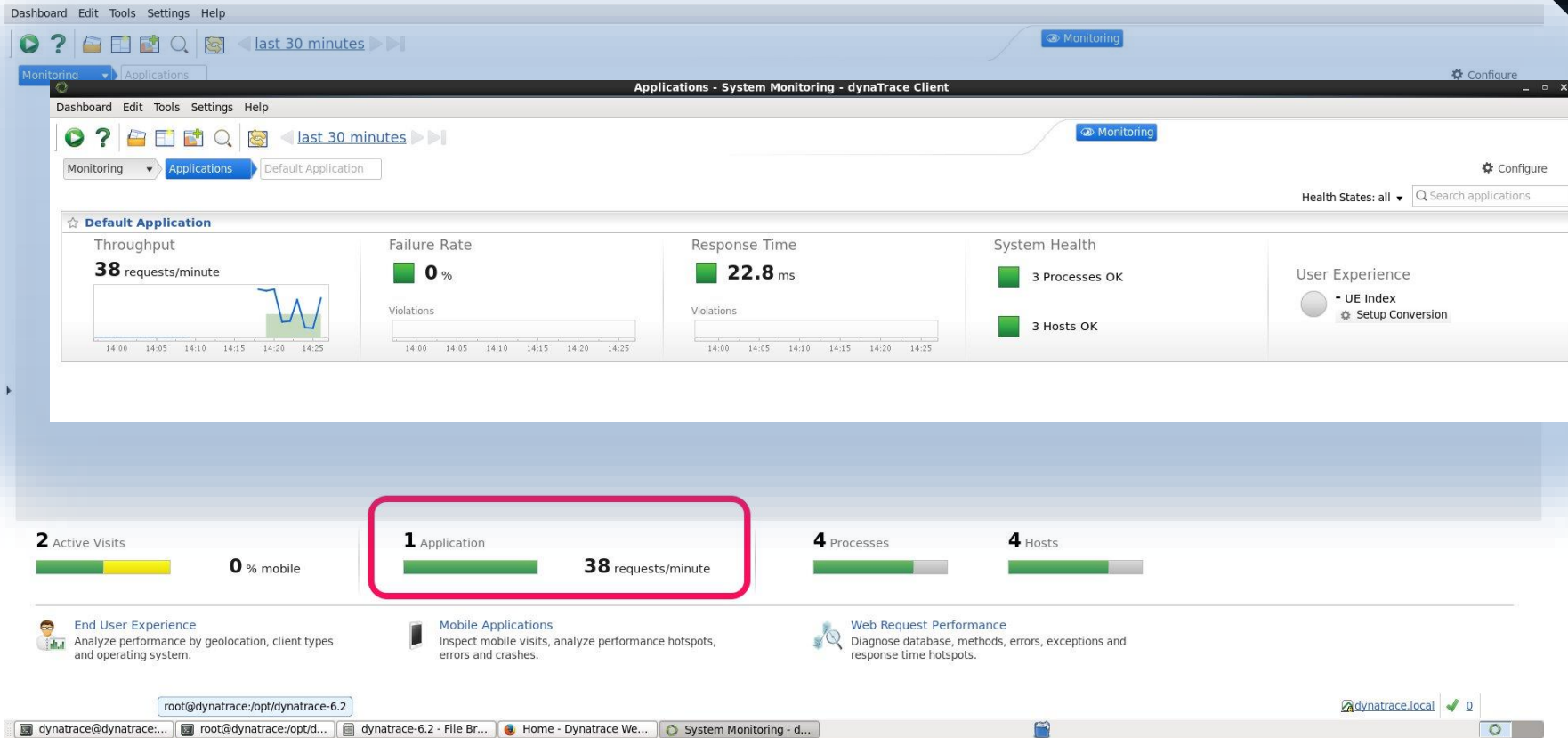
☒ Append timestamp

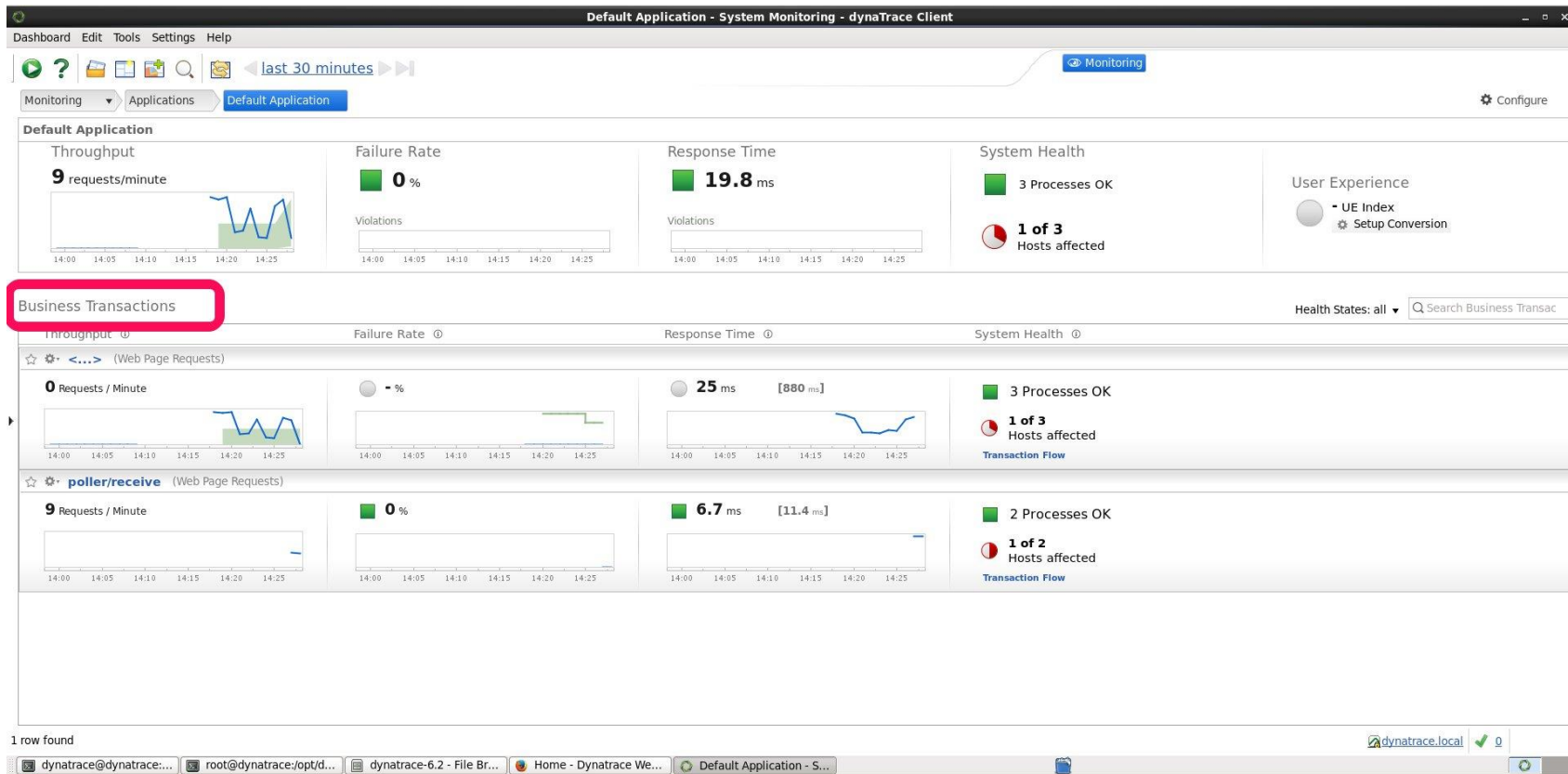
Hint

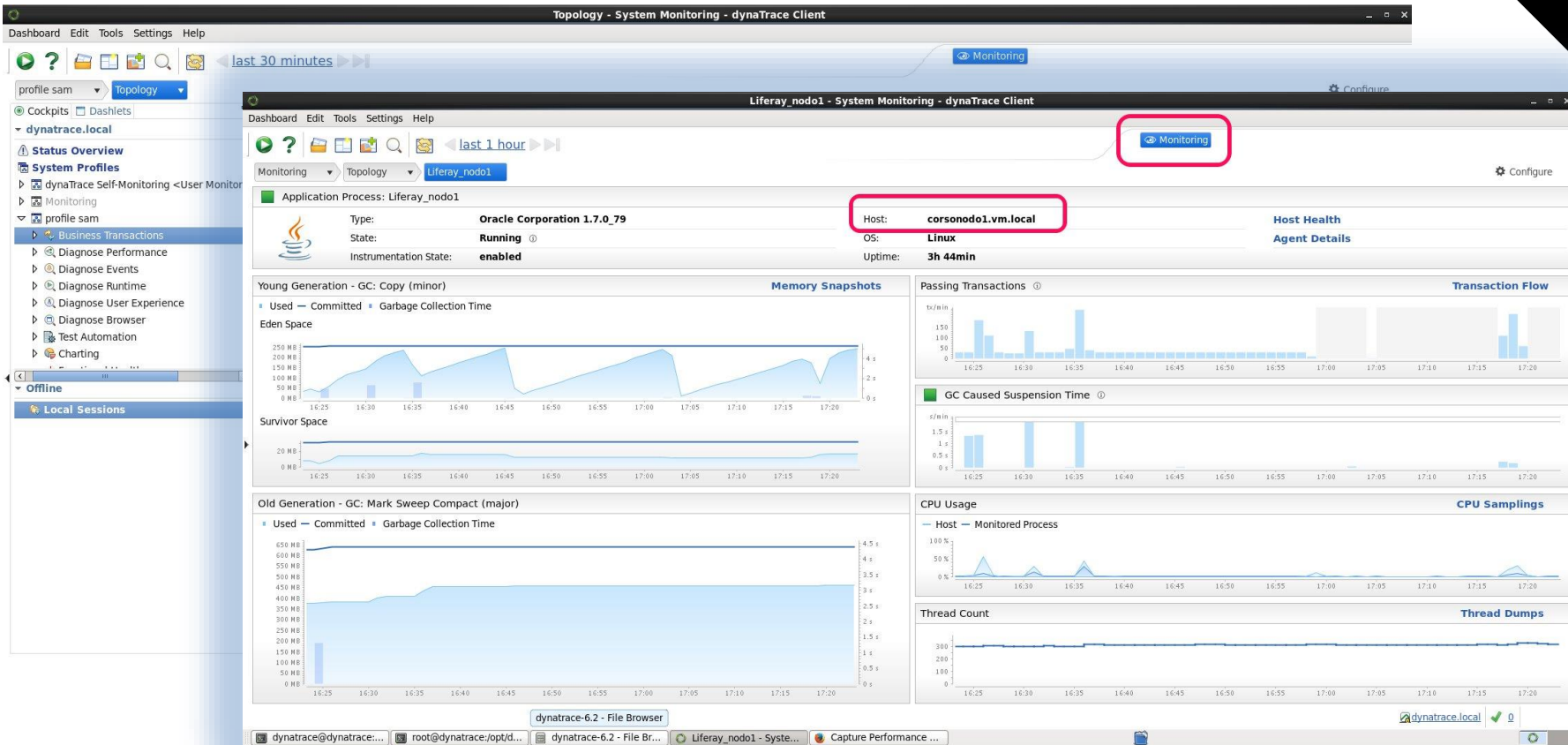
Enter a description text for this session (optional).

OK Cancel

APPLICATION







Dashboard Edit Tools Settings Help

Dashboard Edit Tools Settings Help

Dashboard Edit Tools Settings Help

last 30 minutes

Monitoring Transaction Flow Dashboard

profile sam Web Request Performance

Cockpits Dashlets

dynatrace.local

Status Overview

System Profiles

dynaTrace Self-Monitoring <User Monitoring>

Monitoring

profile sam

Session Storage

PureMetrics is not available. The last successful refresh was on Nov 3, 2015 at 6:47 PM. Press 'F5' to refresh manually.

Web Request

User

Desktop Browse

Default Application

Apache_frontend

Apache_fro...Apache 2.2]

Liferay_nodo1

Liferay_nodo1_profile_sam

Liferay_nodo2

Liferay_nodo2_profile_sam

Database

Database

PostgreSQL

liferay62

60 requests/minute

3 Processes

3 Hosts

Web Request Performance

Diagnose database, methods, errors, exceptions and response time hotspots.

Details

Agent Details

Execution Time Per Transaction:

14.4ms

Transaction Response Time Contribution:

0.68%

Failed Transactions:

0 (0%)

Incoming Calls:

162

Platform:

Web server

Agent:

Apache_frontend_profile_sam[Apache 2.2]@corsoweb.vm.local

Agent Group:

Apache_frontend

Time Details

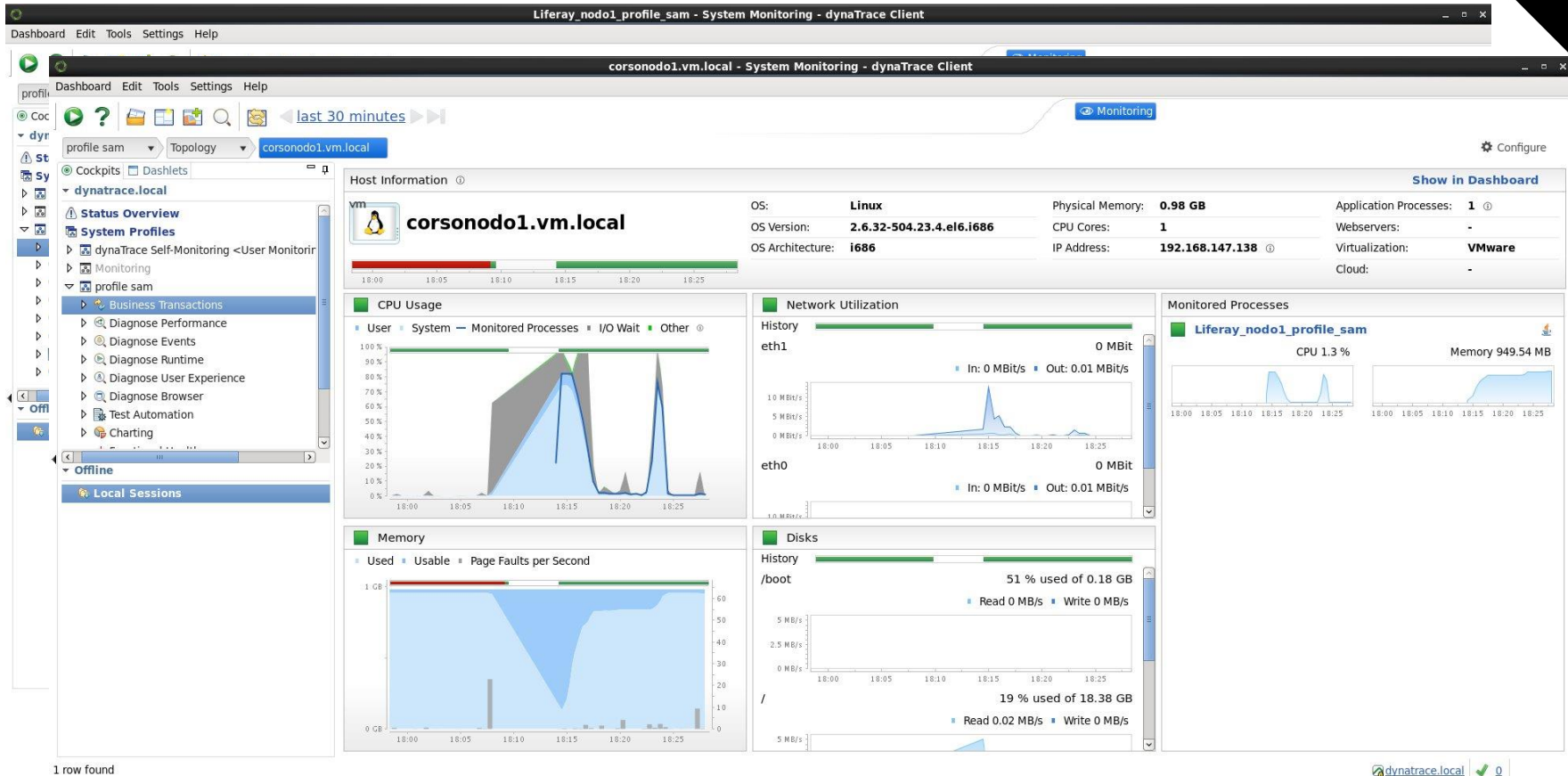
	Average	Minimum	Maximum	Sum	%
Response Time [ms]:	1521.12	6.18	11418.81	246421.65	-
Execution Time [ms]:	14.40	1.37	404.66	2030.97	0.78
Execution CPU Time [ms]:	1.08	0.32	16.67	151.83	0.78
Database Time [ms]:	-	-	-	-	-

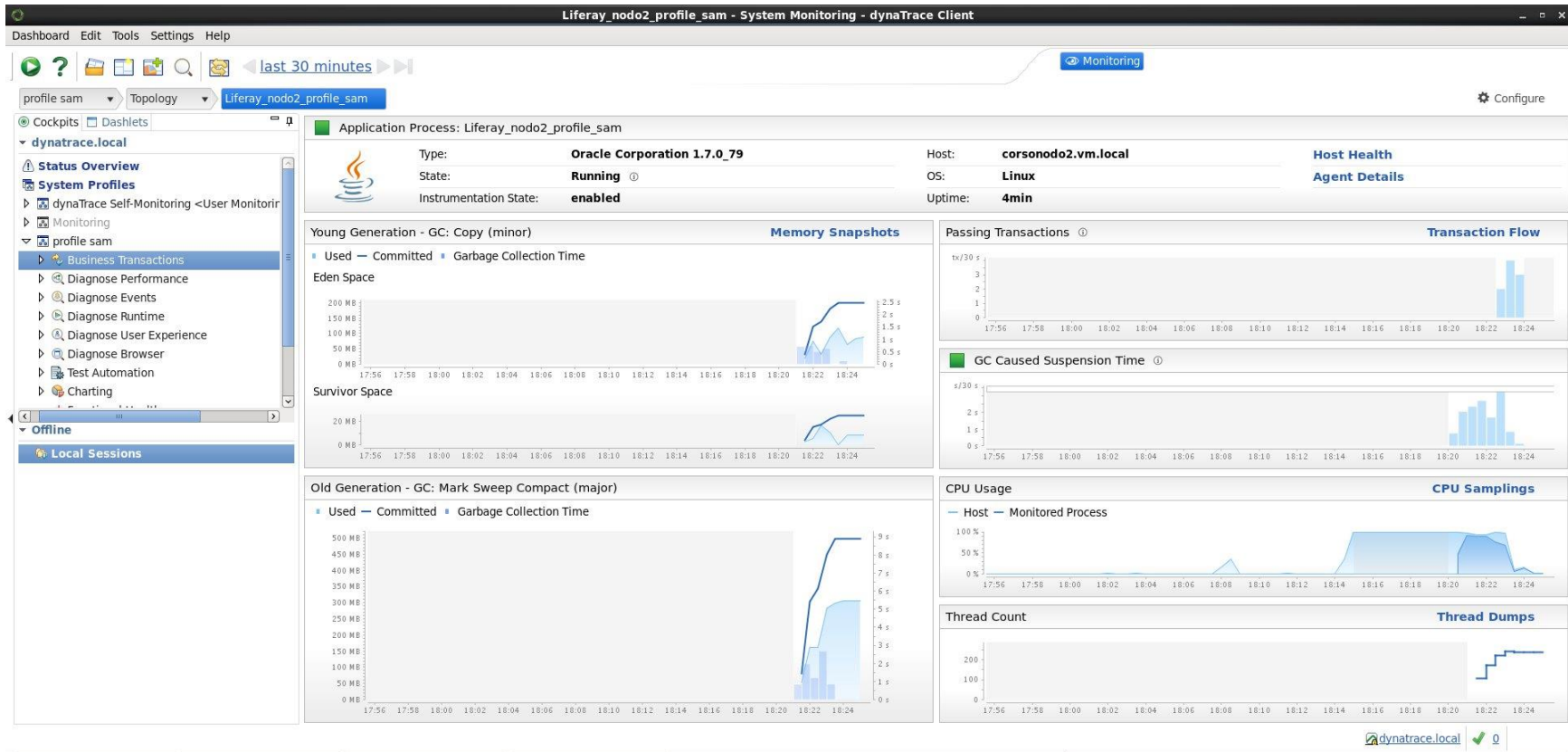
Copy Selected

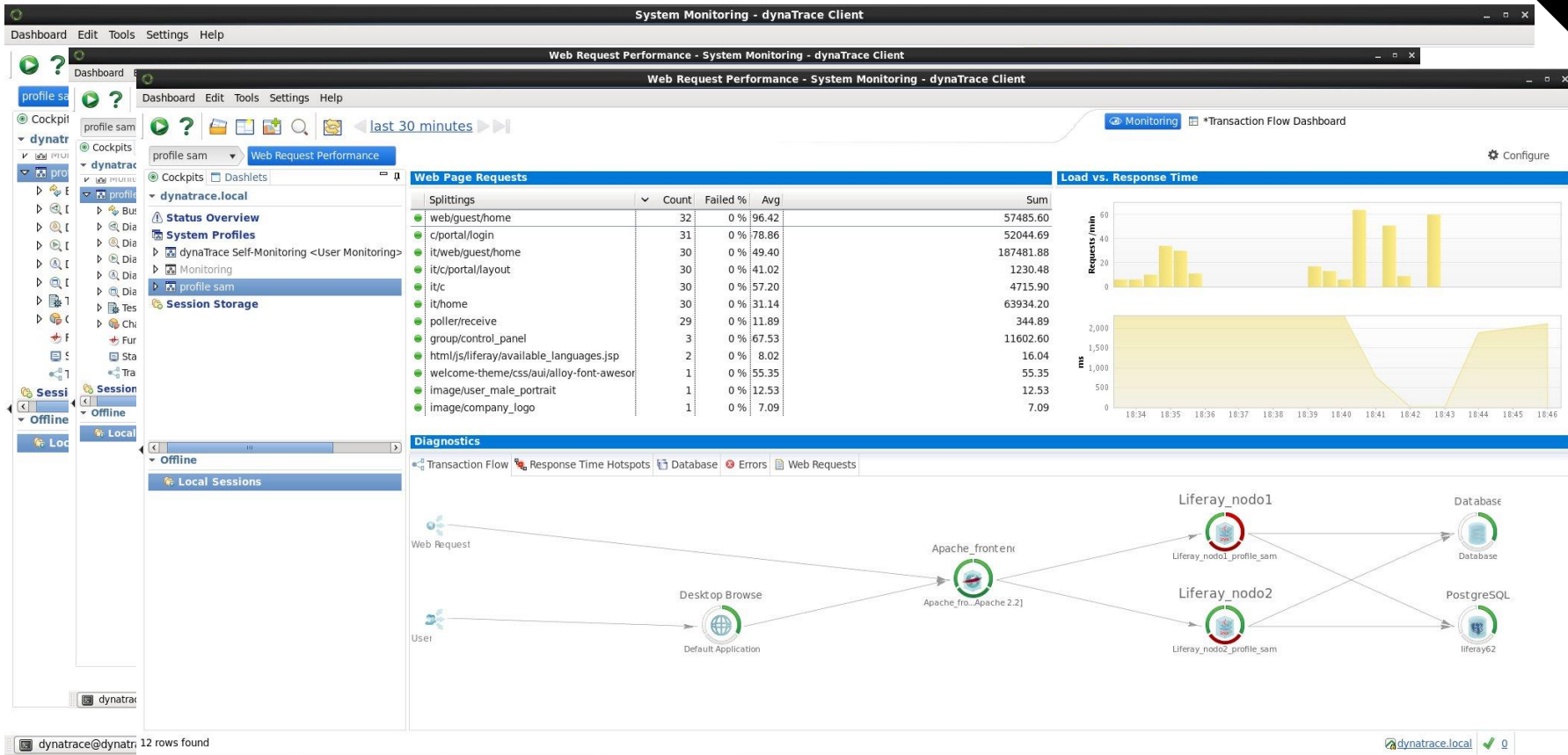
Copy All

Close

dynatrace.local







DATABASE

Dashboard Edit Tools Settings Help

Dashboard Edit Tools Settings Help

Dashboard Edit Tools Settings Help

profile

Cockpits

Dashlets

dynatrace.local

Status Overview

System Profiles

dynaTrace Self-Monitoring <User Monitoring>

Monitoring

profile.sam

Session Storage

last 30 minutes

Monitoring

Configure

Database Hotspots

Select a database statement to find out where it is called from

Database and Connection Pool	Contribution	Executions
liferay62@192.168.85.152:liferay62 (c3p0)	100.0%	1,135
select resourcepe0_resourcePermissionId as resource1_354_resourcepe0_companyId as companyId354_		182
select count(*) as y0_from KaleoInstance this_ where this_companyId=? and this_userId=?		83
SELECT COUNT(DISTINCT KaleoTaskInstanceToken.kaleoTaskInstanceTokenId) AS COUNT_VALUE FROM KaleoTaskInstanceToken		83
SELECT COUNT(DISTINCT KaleoTaskInstanceToken.kaleoTaskInstanceTokenId) AS COUNT_VALUE FROM KaleoTaskInstanceToken		83
select journalart0_id_ as id1_414_journalart0_uuid_ as uuid2_414_journalart0_resourcePrimKey as resourcePrimKey		63
select layoutfrie0_layoutFriendlyURLId as layoutFr1_326_layoutfrie0_uuid_ as uuid2_326_layoutfrie0_g		45
select COUNT(*) as col_0_0_from ResourcePermission resourcepe0_ where (resourcepe0_companyId=? AND		43

Caller Breakdown

Find out from what components the database statement is called

Method	Contribution	Execu	API	Exec Avg [ms]	Exec Min [ms]	Exec Max [ms]	Exec Total [ms]
select resourcepe0_resourcePermissionId as resource1_354_	100.0%	182	-	66.32		1,096.17	20,680.53
Database Summary	100.0%	182	-	66.32		483.36	3,971.82
com.liferay.portal.servlet.MainServlet.service		38	Servlet	211.69	25.65	315.47	2,651.91
com.liferay.portal.kernel.servlet.filters.invoker.InvokerFilter.doFilter		38	Servlet	212.62	33.82	316.23	2,664.48
com.liferay.portal.servlet.I18nServlet.service		35	Servlet	226.99	68.93	316.41	2,633.34
com.liferay.portal.kernel.servlet.filters.invoker.InvokerFilter.doFilter		35	Servlet	234.15	69.87	317.08	2,708.96
Web server.Proxy Request		35	Web server	246.81	71.59	331.15	2,822.46
Web server.Proxy Request		3	Web server	35.39	35.39	35.39	35.39
org.apache.jsp.dockbar_005fnotifications.view_jsp_jspService		31	Servlet	126.2	8.32	275.06	1,243.01
org.apache.jasper.servlet.JspServlet.service		31	Servlet	133.12	28.73	276.37	1,342.78
com.liferay.portal.kernel.servlet.filters.invoker.InvokerFilter.doFilter		31	Servlet	133.19	28.8	276.44	1,343.62
com.liferay.portal.kernel.servlet.PortletServlet.service		31	Servlet	137.64	33.28	277.29	1,431.93
com.liferay.portal.kernel.servlet.filters.invoker.InvokerFilter.doFilter		31	Servlet	139	41.94	277.37	1,442.8
org.apache.jsp.html.portlet.dockbar.view_jsp_jspService		31	Servlet	683.35	266.02	1,231.38	7,255.06
org.apache.jasper.servlet.JspServlet.service		31	Servlet	694.5	266.17	1,246.72	7,393.12
com.liferay.portal.kernel.servlet.filters.invoker.InvokerFilter.doFilter		31	Servlet	695.74	266.27	1,246.85	7,403.07
org.apache.jsp.html.common.themes.portal		31	Servlet	1,074.26	450.28	1,708.31	11,873.78

57 rows found (1 row selected)

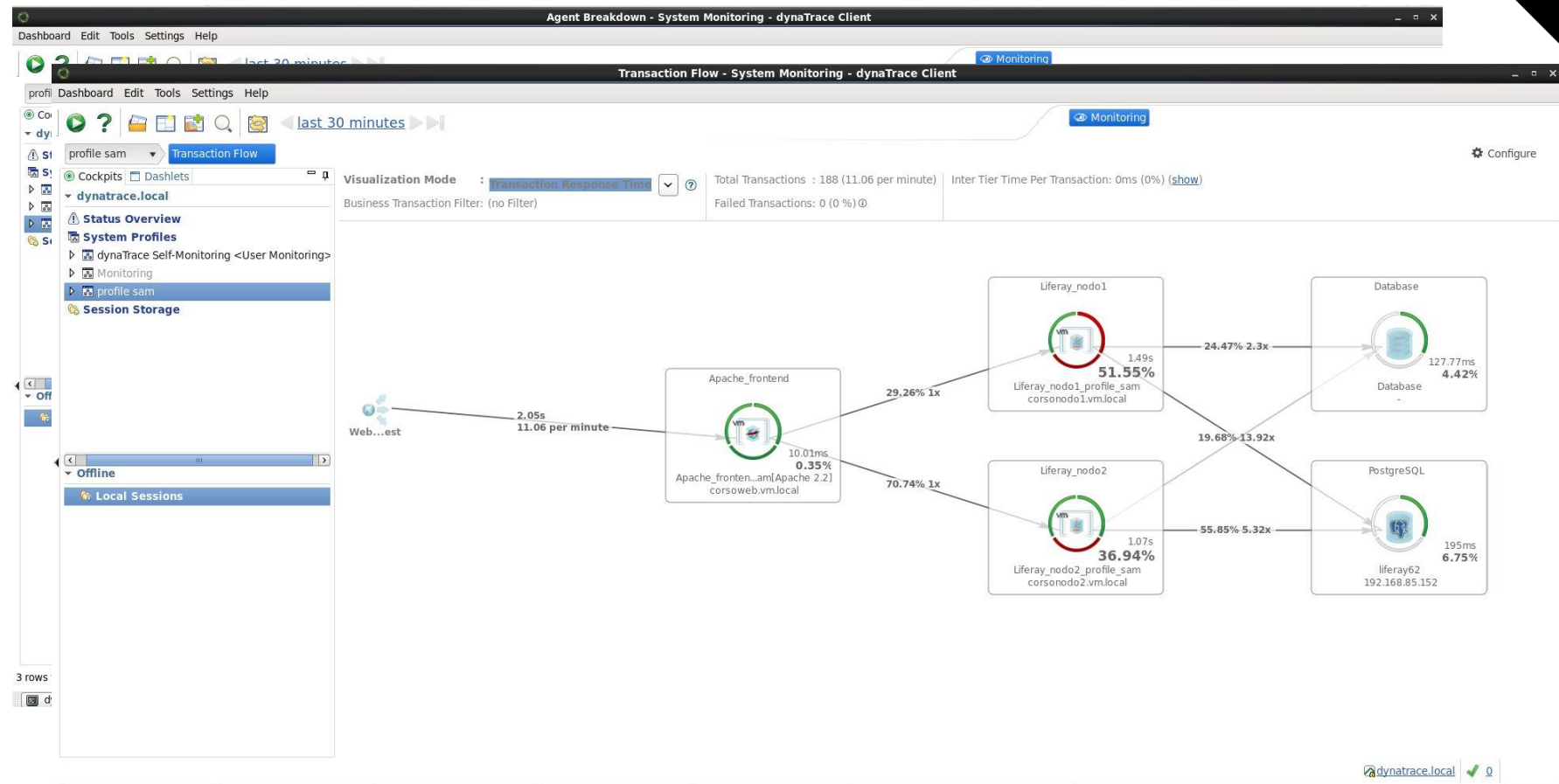
dynatrace-6.2 - File Browser

dynatrace.local

LIFERAY

SYMPOSIUM

VIEW



DashboardEditTools

profile sam

CockpitsDashle

dynatrace.local

Status OverviewSystem Profiles

dynatrace Self-M

Monitoring

profile sam

Session Storage

Details

Agent Details

Execution Time Per Transaction:14.56ms

Transaction Response Time Contribution:0.69%

Failed Transactions:0 (0%)

Incoming Calls:2

User 100%

Platform:Browser

Application:Default Application

Client Family:Desktop Browser

Time Details

	Average	Minimum	Maximum	Sum	%
Response Time [ms]:	8736.50	1315.00	16158.00	17473.00	-
Execution Time [ms]:	1026.31	636.80	1415.82	2052.61	0.79
Execution CPU Time [ms]:	0.00	0.00	0.00	0.00	0
Database Time [ms]:	-	-	-	-	-

Copy SelectedCopy AllClose

System Monitoring - dynaTrace Client

Monitoring

*Transaction Flow Dashboard

Configure

fresh was on Nov 3, 2015 at 6:47 PM. Press 'F5' to refresh manually.

Desktop Browse

Default Application

Apache_frontendApache_fro...Apache 2.2]

Liferay_nodo1Liferay_nodo1_profile_sam

Liferay_nodo2Liferay_nodo2_profile_sam

DatabaseDatabase

PostgreSQLliferay62

Details

Agent Details

Execution Time Per Transaction:14.4ms

Transaction Response Time Contribution:0.68%

Failed Transactions:0 (0%)

Incoming Calls:162

HTTP 100%

Platform:Web server

Agent:Apache_frontend_profile_sam[Apache 2.2]@corsoweb.vm.local

Agent Group:Apache_frontend

Time Details

	Average	Minimum	Maximum	Sum	%
Response Time [ms]:	1521.12	6.18	11418.81	246421.65	-
Execution Time [ms]:	14.40	1.37	404.66	2030.97	0.78
Execution CPU Time [ms]:	1.08	0.32	16.67	151.83	0.78
Database Time [ms]:	-	-	-	-	-

Copy SelectedCopy AllClose

Details

Agent Details

Execution Time Per Transaction:562.04ms

Transaction Response Time Contribution:26.62%

Failed Transactions:0 (0%)

Incoming Calls:45

Webserver Call 100%

Platform:java

Agent:Liferay_nodo1_profile_sam@corsonodo1.vm.local

Agent Group:Liferay_nodo1

Time Details

	Average	Minimum	Maximum	Sum	%
Response Time [ms]:	2352.94	33.64	6051.39	105882.22	-
Execution Time [ms]:	1761.07	33.64	4056.38	79248.22	30.44
Execution CPU Time [ms]:	68.80	4.00	188.47	3096.02	15.93
Database Time [ms]:	39.62	0.07	807.01	23453.00	74.34

Copy SelectedCopy AllClose

dynatrace.local

100%

perform

Dashboard Edit Tools Settings Help

Bluetooth: Enabled

Close Window

Dashboard Edit Tools Settings Help

Monitoring

Configure

profile sam

Methods

cockpits dashlets

dynatrace.local

Status Overview

System Profiles

dynaTrace Self-Monitoring <User Monitoring>

Monitoring

profile sam

Session Storage

Method	API	Count	Agent	Exec Avg [ms]	Exec Sum [ms]	Exceptions	CPU Avg [ms]	CPU Sum [ms]	Sync Avg [ms]	Sync Sum [ms]	Wait Avg [ms]	Wait Sum
com.liferay.portal.kernel.servlet.filters	Servlet	816	Liferay_nodo1_pro	59.37	48444.32	9	1.94	1586.79	36.28	29603.05	-	-
org.apache.jasper.servlet	Servlet	431	Liferay_nodo1_pro	267.04	115092.53	9	13.85	5968.55	146.41	63100.83	-	-

API Breakdown - System Monitoring - dynaTrace Client

Dashboard Edit Tools Settings Help

Monitoring

Configure

profile sam

API Breakdown

cockpits dashlets

dynatrace.local

Status Overview

System Profiles

dynaTrace Self-Monitoring <User Monitoring>

Monitoring

profile sam

Session Storage

API	Exec Avg [ms]	Exec Sum [ms]	CPU Avg [ms]	CPU Total [ms]	Sync Avg [ms]	Sync Sum [ms]	Wait Avg [ms]	Wait Sum [ms]
Liferay	2499.96	154992.13	81.72	6647.95	440.71	24336.33	1153.93	89328.43
JSP	2247.25	69664.83	23.01	713.40	2035.51	63100.83	0.00	0.00
JDBC	477.34	52984.86	3.65	7.31	0.00	0.00	0.00	0.00
Servlet	412.56	51157.40	21.20	2628.28	19.75	2448.59	0.00	0.00
SF	1885.85	30173.56	11.11	177.79	1850.19	29603.05	0.00	0.00
Classloading	1095.66	23008.96	46.86	984.07	255.29	5361.11	0.00	0.00
Jaxen	394.15	7488.94	17.53	333.12	163.34	3103.38	0.00	0.00
Dom4j	230.00	5979.95	14.84	385.88	12.49	324.62	0.00	0.00
Connection Po	51.54	5721.18	-	-	0.00	0.00	0.00	0.00
Hibernate	159.60	3032.48	11.88	225.72	88.65	1684.34	0.00	0.00
Struts	137.25	2058.80	6.33	94.95	121.26	1818.96	0.00	0.00
Web server	10.68	1420.55	1.14	151.49	0.00	0.00	0.00	0.00
Yahoo	113.69	1023.20	9.10	81.93	0.00	0.00	0.00	0.00
Threading	29.91	957.24	0.48	15.39	0.00	0.00	0.00	0.00
Bostroncel	76.86	927.33	6.72	80.63	0.00	0.00	0.00	0.00

Exec Sum (ms)

Liferay JSP JDBC Servlet Classloading Jaxen Dom4j Connection Pooling Others (11 items)

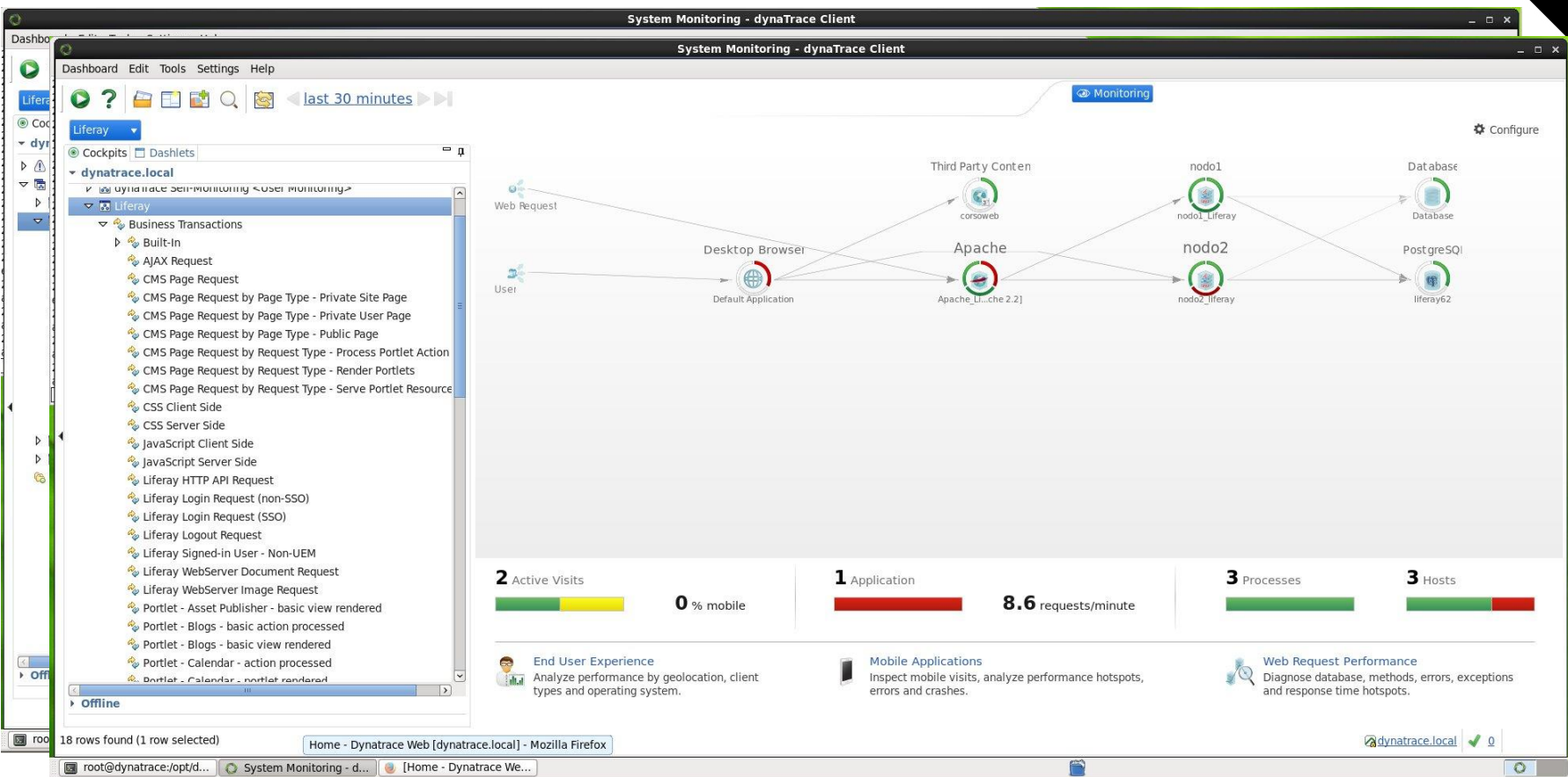
20 rows found (1 row selected)

API Breakdown - System Monitoring - dynaTrace Client

dynatrace.local

dynatrace.local

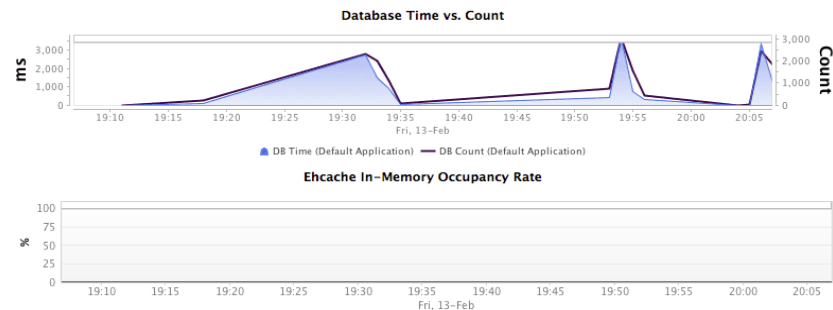
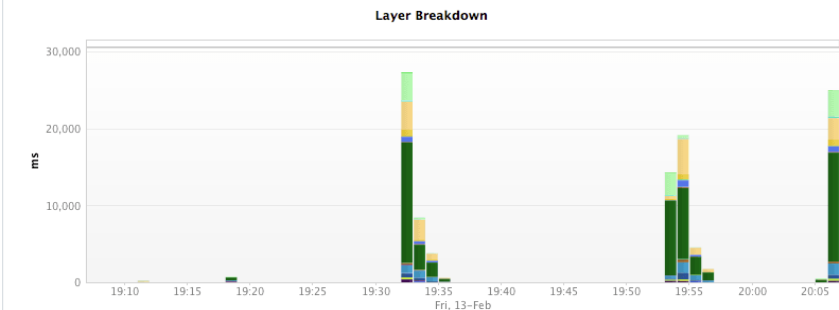
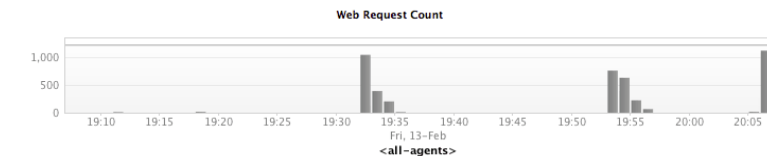
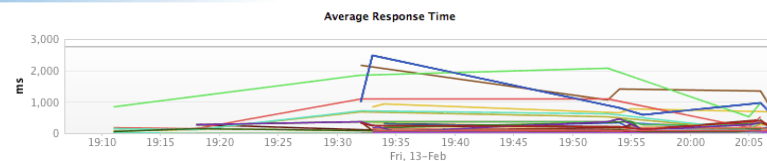
DYNATRACE FASTPACK FOR LIFERAY PORTAL



Asset Publisher Blogs Calender CMS Pages CSS & JS Documents And Media Login & Logout Media Gallery



Message Boards Search Sign In Web Content/Display Wiki/Display Process Health Host Health



Agent Breakdown

Name	Group	Failed %	Exec Avg [ms]	Exec Sum [ms]	Database Avg [ms]	Database Sum [ms]	CPU Exec Avg [ms]	CPU Exec Total [ms]	Sync Avg [ms]	Sync Min [ms]	Sync Max [ms]	Sync Sum [ms]	Wait
Apache_Monitor	Apache	0.16 %	153.59	681027.40	-	-	0.48	2143.13	0.00	0.00	0.00	0.00	
Tomcat-1	Tomcat	0 %	65.21	296654.59	0.59	16257.80	30.93	140689.28	0.09	0.00	71.90	431.98	

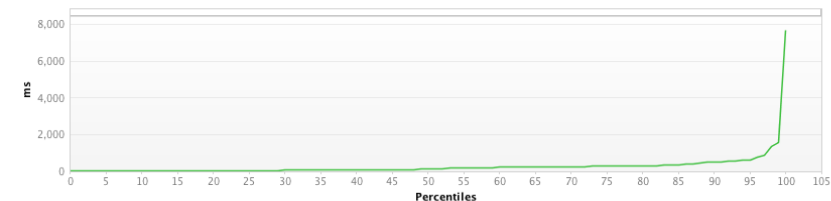


Avg Time: 242.50 ms

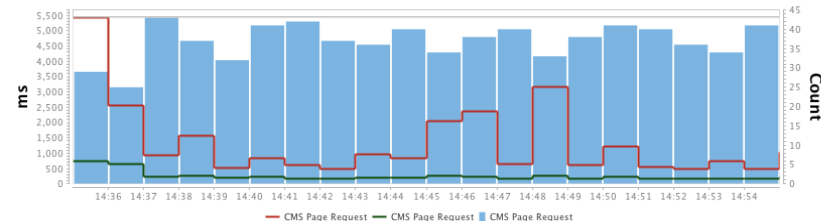
Page Count: 743

Business Transaction		today					yesterday				
Name		Count	PurePath Response Time [avg]	PurePath Response Time [95th pct]	Failed %	Incidents	Count	PurePath Response Time [avg]	PurePath Response Time [95th pct]	Failed %	Incidents
CMS Page Request (split by CMS Pages URI - spli <ul style="list-style-type: none"> /web/guest/blogs /web/guest/calendar /web/guest/home /web/guest <...> 		824	246.96 ms	436.10 ms	0 %	0	0	-	-	0 %	0
		62	360.55 ms	794.46 ms	0 %	0					
		120	92.52 ms	94.47 ms	0 %	0					
		93	153.22 ms	296.66 ms	0 %	0					
		67	215.63 ms	208.55 ms	0 %	0					
		482	293.25 ms	767.96 ms	0 %	0					

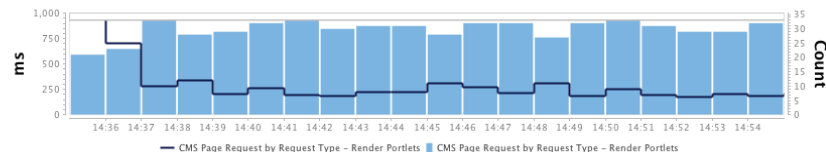
Percentile Response Time



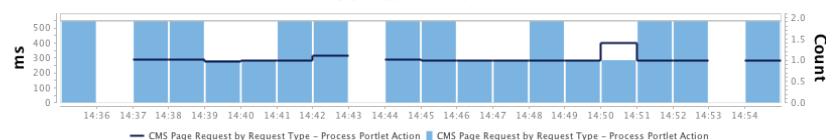
CMS Pages Avg/Max vs. Count



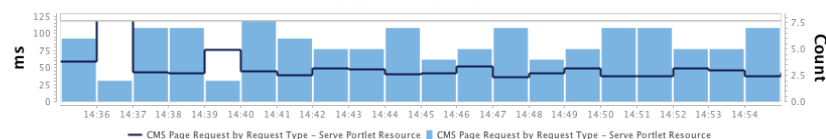
CMS Render Portlets Load



CMS Process Portlet Action Load



CMS Serve Portlet Resource Load





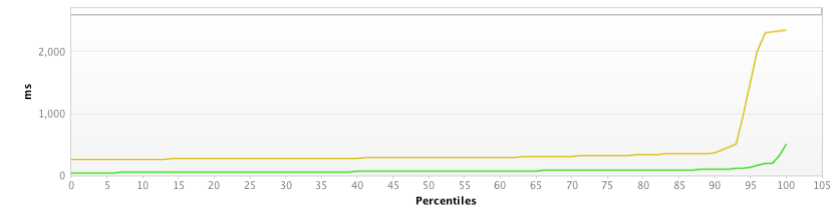
Incident Rule

Incident Rule	Overall State	Current State
Application Process Out-of-Memory	✓	✓
Application Process Unavailable (unexpected)	✓	✓
Application Process Unhealthy	✓	✓

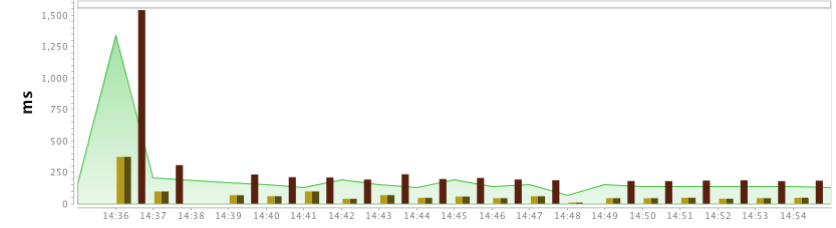
Press 'F2' for focus.

Business Transaction		today									
Name		Count	PurePath	Response Time	PurePath R	Failed %	Incidents	Count	PurePath	Response Time	
Portlet - Search - basic view rendered (split by S	/search/search	120		191.63 ms	343.17...	0 %	0	0			
	/search/view	40		407.21 ms	999.22...	0 %	0				
		80		83.84 ms	142.20...	0 %	0				

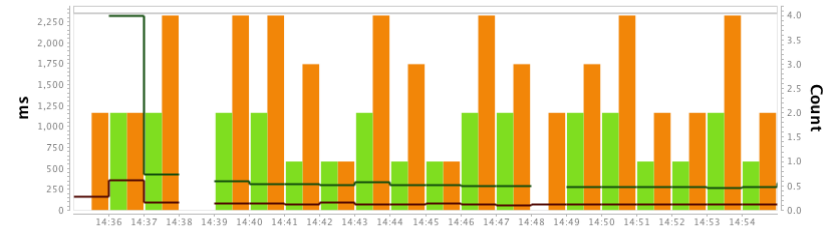
Percentile Response Time



Search Method Time vs. Search Transaction Time



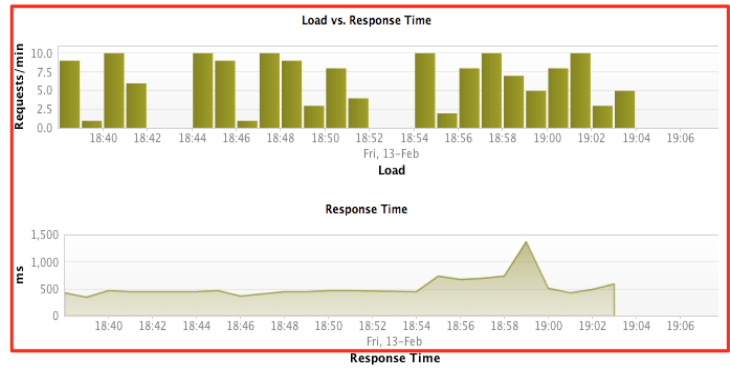
Search Basic View Rendered



Search API Breakdown

API	Exec Avg [ms]	Exec Sum [ms]	CPU Total [ms]	Sync Sum [ms]	Wait Sum [ms]	Suspension Sum [ms]
Liferay Search Lucene	53.27	2557.04	2172.87	17.82	0.00	0.00
Liferay Search Kernel	15.91	875.22	859.39	0.00	0.00	0.00

Application	Splittings	Count	Failed %	Avg	Max	Sum
Default Application	<...>	584	0 %	171.46	5223.18	100130.44
Default Application	/web/guest/calendar	288	0 %	29.20	89.39	8410.41
Default Application	/web/guest/home	229	0 %	138.71	377.89	31764.85
Default Application	/web/guest/message-boards	216	0 %	133.72	424.46	28883.71
Default Application	/web/guest	158	0 %	94.71	5086.51	14964.11
Default Application	/web/guest/blogs	156	0 %	248.08	5248.80	38699.72
Default Application	/web/guest/wiki	148	0 %	539.11	4792.11	79788.61
Default Application	/web/guest/search	144	0 %	128.79	5037.44	18545.34
Default Application	/group/guest/private-home-...	72	0 %	78.82	475.42	5674.86



Transaction Flow

Response Time Histogram

Database

Errors

Web Requests

Portlet rendered

Portlet resource ...

Portlet action p...

StrutsPortlet ren...

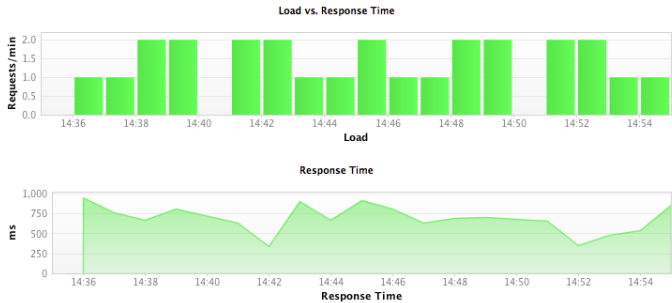
StrutsPortlet re...

1

Name	Result Measures	Splittings	Count	Avg	Max	Min	Failed %
Portlet rendered	PortletContainerUtil.render() Time	54_INSTANCE_rriFmiqthCfc	148	105.15	214.91	78.86	0 %
Portlet rendered	PortletContainerUtil.render() Time		36	105.15	214.91	78.86	0 %
Portlet rendered	PortletContainerUtil.render() Time		145	105.15	214.91	78.86	0 %
Portlet rendered	PortletContainerUtil.render() Time	54_INSTANCE_BWd8DBqqdEPy	148	105.15	214.91	78.86	0 %

This dashboard gives you a performance overview of every HTTP API request.
Select a HTTP API Request, analyze response time and load distribution in the charts and identify root cause of performance and scalability problems in the diagnostics charts.

Application	Splittings	Count	Failed %	Avg	Max	Sum
Default Application	api/jsonws	26	0 %	666.14	948.75	17319.66



Transaction Flow
Response Time Hotspots
Database
Errors
Web Requests

Visualization Mode : Topology
Business Transaction Filter : [api/jsonws \(Liferay HTTP...](#)

Total Transactions : 26 (1.3 per minute)
Failed Transactions : 0 (0 %)
Inter Tier Time Per Transaction : 0ms (0%) ([show](#))



Host Health

Incident Chart



Host Network Receive



Free Memory



Host Network Send



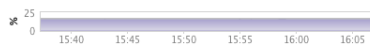
CPU Total Time



Disk Utilization



CPU User Time



CPU System Time



Disk Read/Sec



Disk Write/Sec



Process Health

Incident Chart



GC Utilization (GTime CPU is in GC)



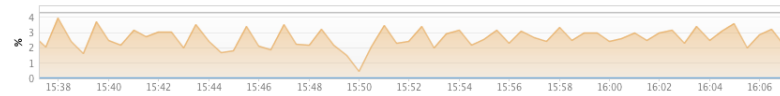
Memory Utilization (% of heap memory used)



Process CPU



Process CPU



Application Health

Incident Chart



Thread Count



Transaction Duration With/Without GC



PurePath Duration PurePath Duration w/o Suspension

Last 30 minutes



1
Failed Transactions
0.07 %
Failure Rate

From 15:08 to 15:38

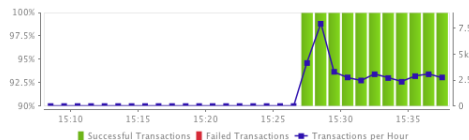
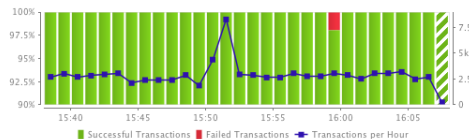


0
Failed Transactions
0 %
Failure Rate

Error Hotspots by Application (Last 30 minutes)

[Default Application](#)

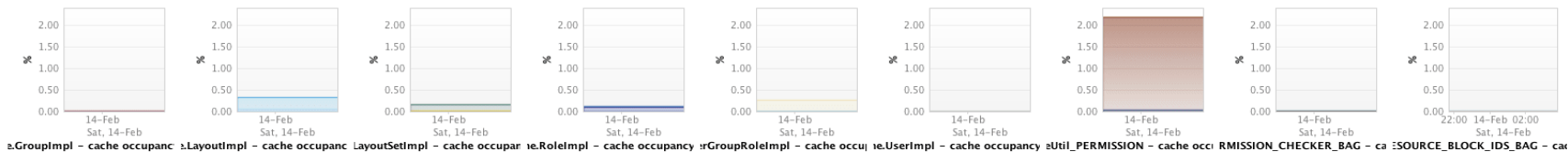
Functional Health



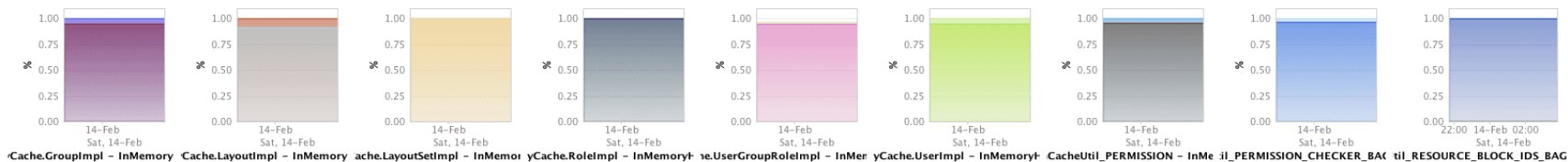
Error Hotspots (Last 30 minutes)

[HTTP 4xx Response on Transact](#)

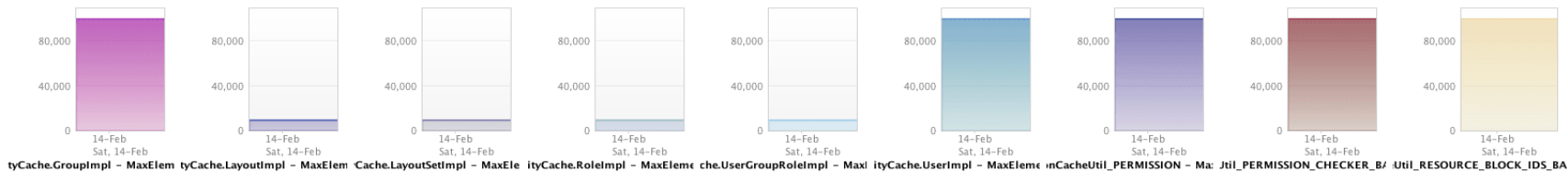
Cache Occupancy Rate (in-memory)



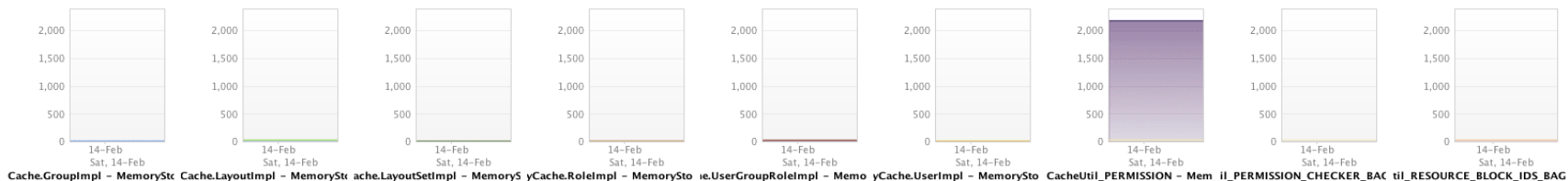
In-Memory Hit Percentage



Max Elements in Memory



Memory Store Object Count



Process Alerts



Application
Process Out-of-
Memory



Application
Process
Unavailable
(unexpected)



Application
Process Unhealthy

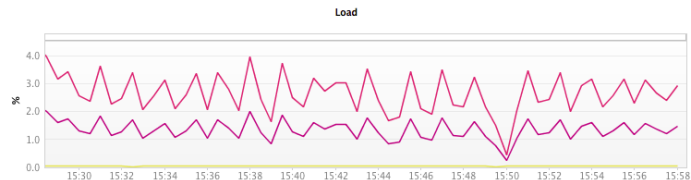
Host Alerts



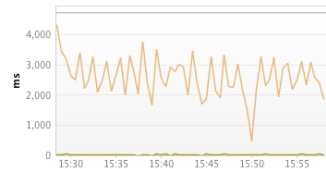
Transaction
Alerts



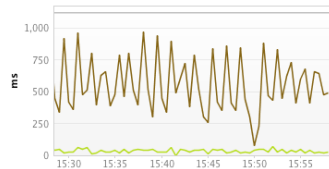
Process CPU Usage



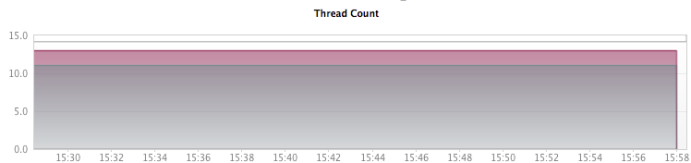
User Time



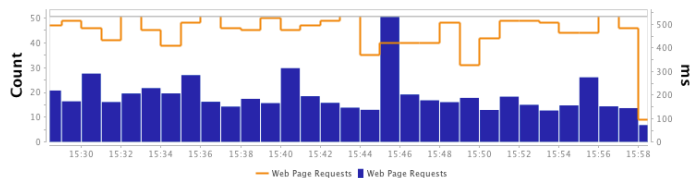
System Time



Thread Pool Usage

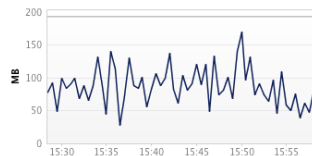


Request Count/Response Time



Heap Usage

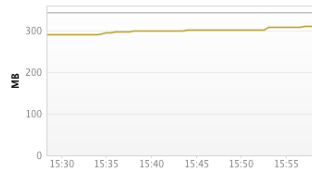
Eden



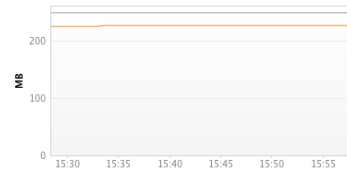
Survivor



Old/Tenured



Perm

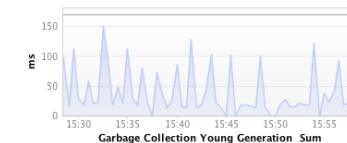


Garbage Collection

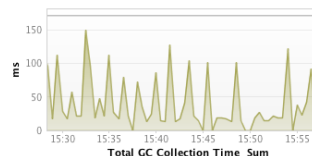
Old Gen GC Sum



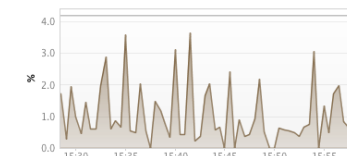
Young Gen GC Sum



Total GC Sum



Total GC Utilization



Database Hotspots

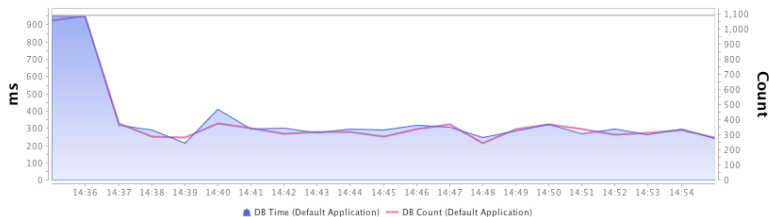
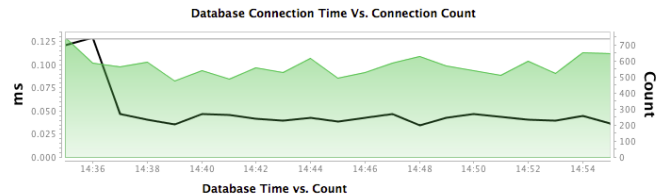
Select a database statement to find out where it is called from

Database and Connection Pool	Contribution	Execution
liferay@dynatrace:portal (Tomcat)	99.0%	7,980
(SELECT Groups_Roles.roleId FROM Groups_Roles INNER JOIN Gr		737
select resourcepe0_resourcePermissionId as resource1_354_, re		545
select resourcepe0_resourcePermissionId as resource1_354_, re		415
SELECT DISTINCT wikiNode.modelId as modelId460_0_ wikiNode.u		336
SELECT COUNT(DISTINCT Group_groupId) AS COUNT_VALUE FR		297
select socialacti0_activityId as activityId445_, socialacti0_group		276
SELECT COUNT(DISTINCT Group_groupId) AS COUNT_VALUE FR		270
(SELECT UserGroupRole.userId as userId366_0_ UserGroupRole.		270
SELECT COUNT(DISTINCT Group_groupId) AS COUNT_VALUE FR		270
SELECT COUNT(DISTINCT Group_groupId) AS COUNT_VALUE FR		270
select assetentry0_entryId as entryId382_, assetentry0_groupId		252
update AssetEntry set groupId=?, companyId=?, userId=?, userN		226
SELECT DISTINCT wikiPage.pageId as pageId461_0_ wikiPage.uu		196
SELECT COUNT(DISTINCT dFolder.folderId) AS COUNT_VALUE FR		185
SELECT COUNT(DISTINCT KaleoTaskInstanceToken.kaleoTaskInst		160

Caller Breakdown

Find out from what components the database statement is called

Method	Contribution	Execution	API	Exec Avg [ms]	Exec Min [ms]	Exec Max [ms]
(SELECT Groups_Roles.roleId FROM Group	100.0%	737	JDBC	1.14	0.3	
com.mysql.jdbc.PreparedStatement.execu	100.0%	737	JDBC	1.14	0.68	
com.liferay.portal.servlet.MainServlet.se	96.0%	709	Liferay	132.81	7.46	5,41
com.liferay.portal.kernel.servlet.filter	96.0%	709	Liferay	133.17	8.6	5,41
com.liferay.portal.servlet.FriendlyU	88.0%	655	Liferay	142.23	17.72	5,42
com.liferay.portal.kernel.servlet	88.0%	655	Liferay	146.07	26.87	5,42
/web/guest/calendar		112	Web Request			
/web/guest/search		54	Web Request			
/web/guest/document-librar		54	Web Request			
/web/guest/wiki/-/wiki/Mair		28	Web Request			
/web/guest/message-boards		28	Web Request			
/web/guest/message-boards		28	Web Request			
/web/guest/blogs/-/blogs/h		28	Web Request			
/web/guest/wiki		28	Web Request			
/web/guest/message-boards		28	Web Request			
/web/guest/blogs		28	Web Request			
/		28	Web Request			
/group/guest/private-home-		27	Web Request			
/web/guest/page-with-long-		26	Web Request			
/web/guest/media-gallery		26	Web Request			
/web/guest/page-with-long-		26	Web Request			
/home		26	Web Request			
/web/guest/web-content		26	Web Request			
/web/user.test2/home		14	Web Request			
/user/user.test2/home		14	Web Request			

Connection Time
Violation in MS

Slow SQL Statements

SQL	Execs/calling Transac	Exec Max [ms]	Exec Avg [ms]	Executions	Preparations
SELECT DISTINCT wikiPage.pageId as pag	3.50	36.04	2.13	196	5
SELECT DISTINCT wikiNode.modelId as no	6.00	31.90	2.05	336	8
select resourcepe0_resourcePermissionI	14.34	18.73	0.93	545	276
update AssetEntry set groupId=?, compa	2.04	8.89	0.53	226	226
SELECT DISTINCT mbCategory.categoryId	2.00	7.39	1.50	112	5
(SELECT Groups_Roles.roleId FROM Gro	1.04	6.91	1.14	737	0
SELECT COUNT(DISTINCT Group_groupId)	5.50	6.71	0.50	297	1
(SELECT COUNT(DISTINCT DLFileVersion	3.00	6.49	1.45	159	2
select socialacti0_activityId as activityId	2.00	5.76	0.58	276	129
SELECT COUNT(DISTINCT dFolder.folder	2.34	5.68	1.12	185	4
select resourcepe0_resourcePermissionI	17.29	5.19	0.50	415	141
select assetentry0_entryId as entryId38	2.23	5.19	0.58	252	5
SELECT * FROM (SELECT DISTINCT folde	1.34	4.49	2.25	106	1
(SELECT COUNT(DISTINCT folderId) AS C	2.03	4.14	1.87	160	2
SELECT DISTINCT dFolder.folderId as fol	2.55	3.55	1.57	135	1
SELECT COUNT(DISTINCT KaleoTaskInsta	1.01	2.14	0.78	160	1
SELECT COUNT(DISTINCT Group_groupId)	10.00	1.86	0.43	270	270
(SELECT UserGroupRole.userId as userId	10.00	1.82	0.44	270	0
SELECT COUNT(DISTINCT Group_groupId)	10.00	1.67	0.38	270	270
SELECT COUNT(DISTINCT Group_groupId)	10.00	1.65	0.49	270	270

[Response Time Hotspots](#)
[Execution Hotspots](#)
[Pool Usage](#)

RECAP

«COSA SIGNIFICA PERFORMANCE»

«IMPORTANZA DI USARE LA STESSA TERMINOLOGIA»

«DEFINIRE LE ASPETTATIVE»

«ANALIZZARE NEL DETTAGLIO PIU' INFORMAZIONI POSSIBILI»

«ESEMPIO DI DYNATRACE»



Community Excellence Award 2015

For outstanding contributions to the Liferay Community