

이제 온라인이다! 브라우저 안으로 들어온 Visual Studio!

Microsoft MVP(ASP.NET/IIS)
김경균, 한상훈

클라우드 기반의 온라인 편집기 VSO "Monaco"

Microsoft MVP(ASP.NET/IIS)
김경균

Visual Studio Online 'Monaco'

Monaco와 함께 한다면 아주 쉽게 Azure 웹사이트를 시작할 수 있고 여러분의 Azure 웹사이트를 신속하게 편집할 수 있게 해 준다.

Monaco User Interface

- 가볍고 부드럽다

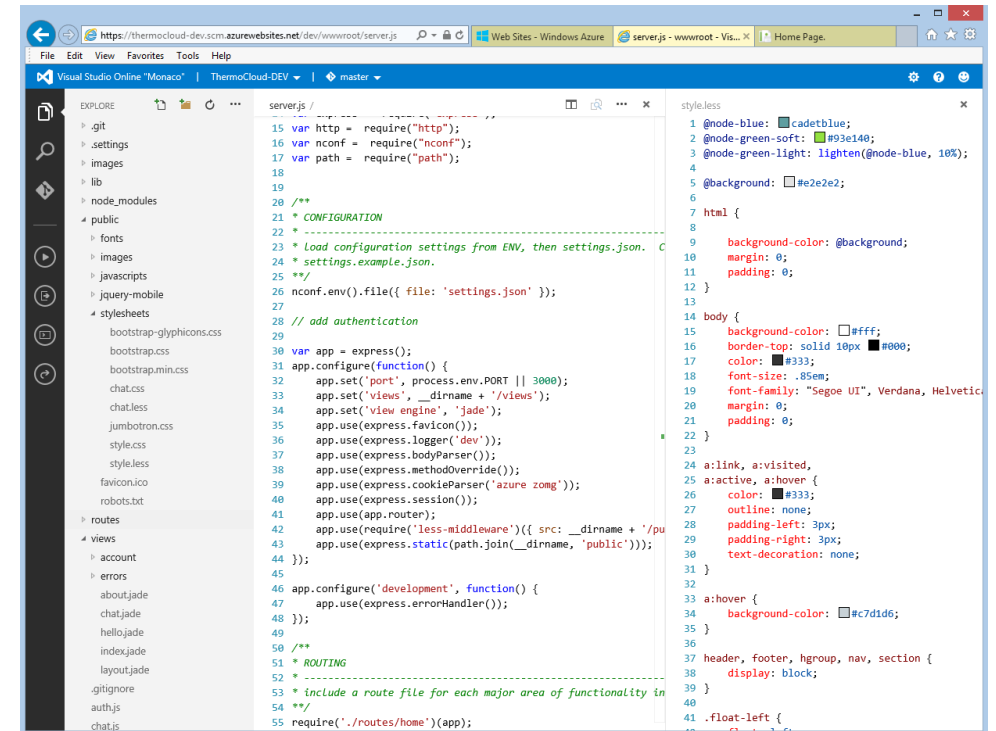
- 모든 플랫폼의 모든 최신 브라우저에서
- 접속할 수 있는 VS IDE의 동반자.

- Azure에 최적화

- Azure에서 직접 개발, 관리 및 웹사이트 실행

- 풍부한 편집 경험

- 브라우저라는 느낌 없이 빠르고 부드러운 코드 편집
- 최신 프레임워크와 언어 지원
- HTML5와 JavaScript(TypeScript 포함), Node, PHP, ASP.NET 사이트 및 앱



파일 탐색

Git SCC

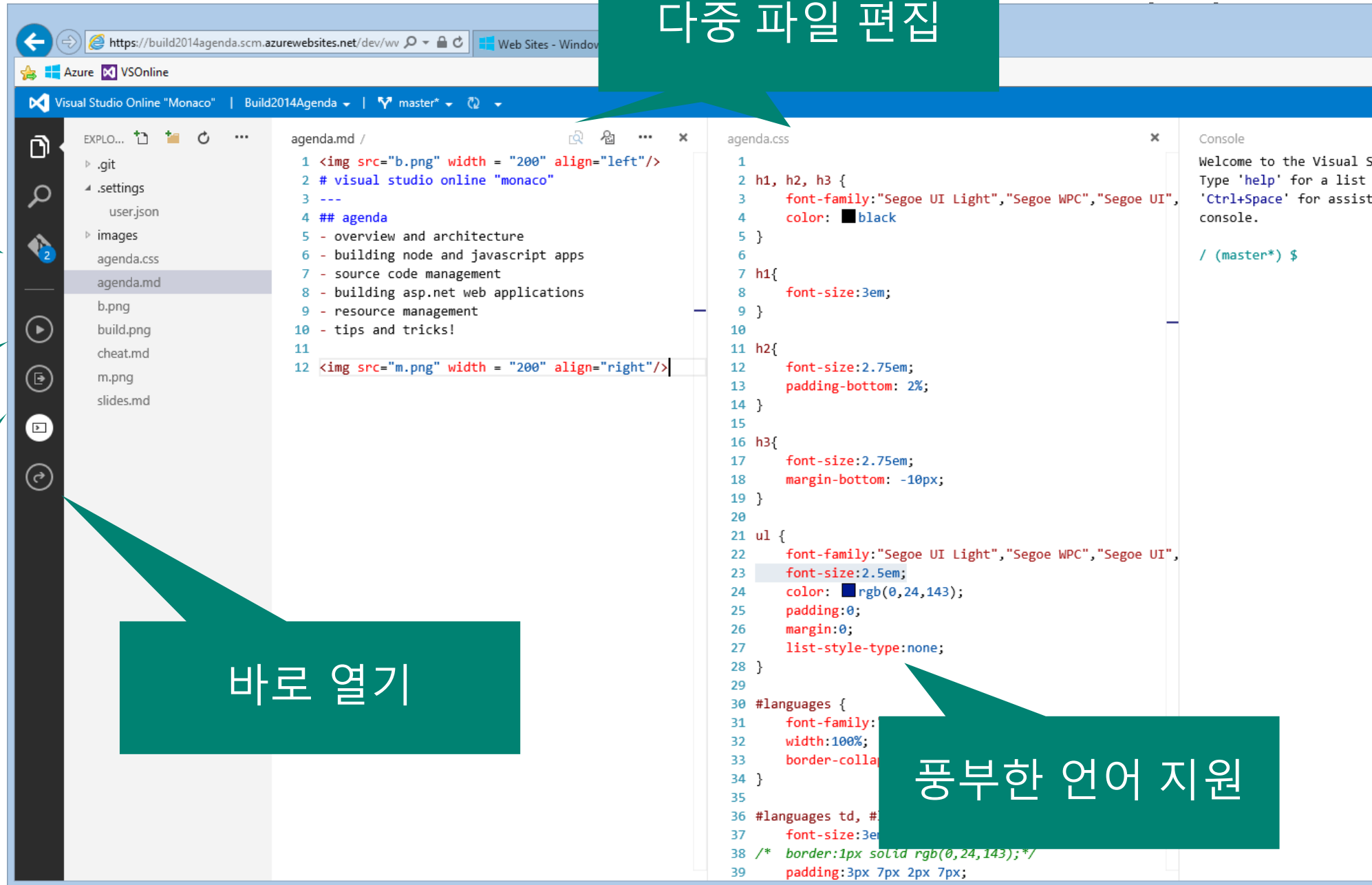
F5/실행

결과 및 콘솔

바로 열기

다중 파일 편집

풍부한 언어 지원



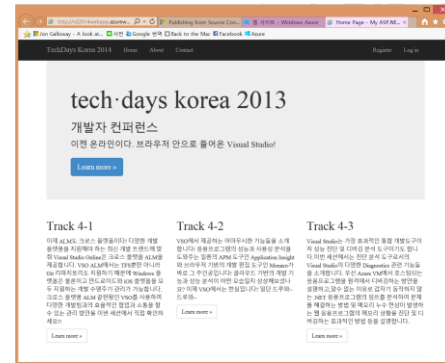
아키텍처

Monaco 서비스는 모든 Azure 사이트에 대해 사이트 확장으로 사용 가능

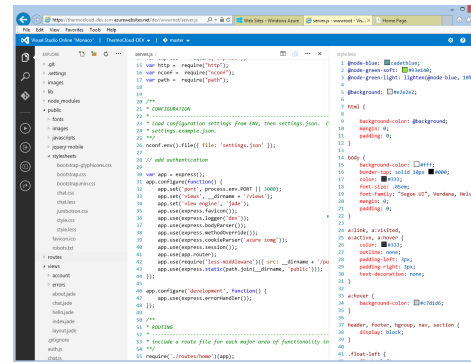
사이트 구성 옵션과 배포 자격 증명을 통해 접속 제어

“.scm” 끝점을 통해 틀에 접근하고 wwwroot를 실시간 편집

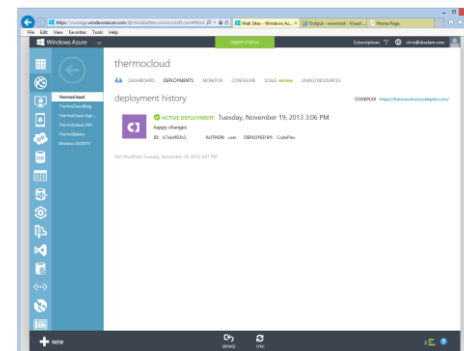
peer to Azure 배포 서비스 (“Kudu”)로 동작



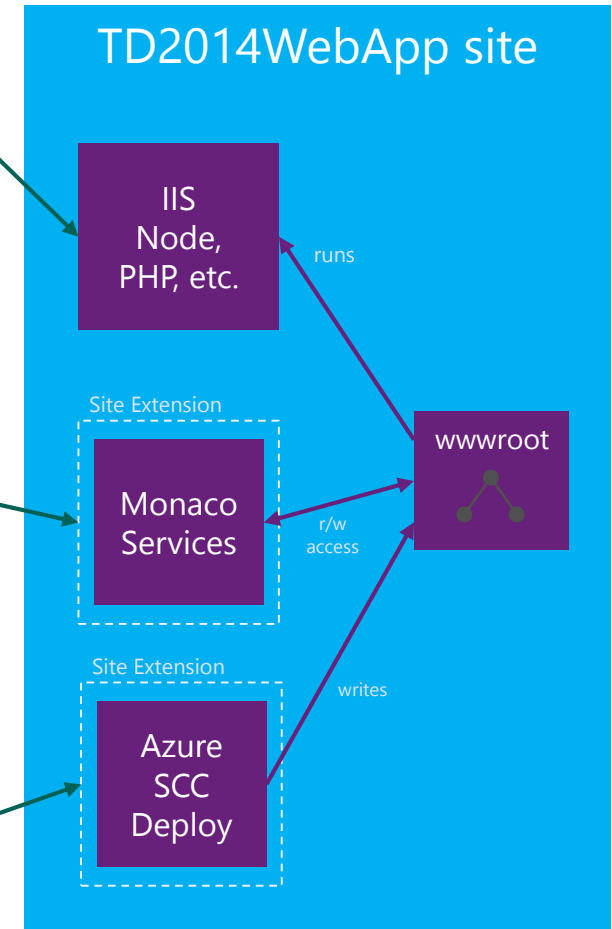
<http://td2014webapp.azurewebsites.net>



<https://td2014webapp.scm.azurewebsites.net/dev>



<https://td2014webapp.scm.azurewebsites.net/td2014webapp.git>



수준	기능	언어
기본	스마트 편집과 구문 강조, 괄호 매칭, 자동 들여쓰기, 단어 완성	C#, VB, Razor, Markdown, Handlebars, HTML, XML, INI, Batch, Jade, CoffeeScript
중음	입력에 대한 오류 검사, 인텔리센스, 정의로 이동, 아웃라인, 심볼명 변경	JavaScript, JSON, CSS, LESS, SASS, PHP
훌륭함	파일간 참조 검색	TypeScript

Monaco 시작하기

Microsoft Azure | 크레딧 상태

WEBSOCKET 설정 해제

이 기능은 Basic 또는 Standard 모드에서만 사용하도록 설정할 수 있습니다.

무중단 설정 끄기

VISUAL STUDIO ONLINE에서 편집 설정 해제 ? PREVIEW



간략 상태

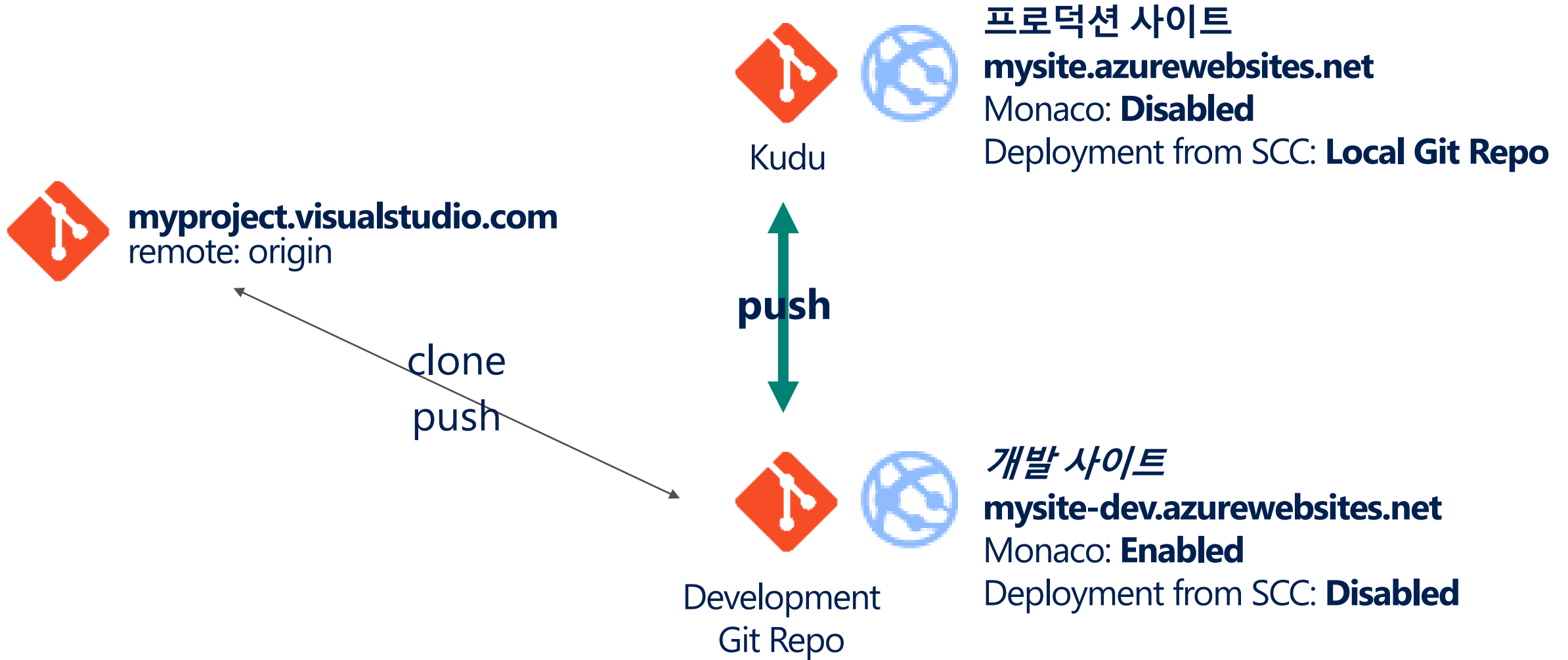
- 새 포털 방문 미리 보기
- 적용 가능한 추가 기능 보기
- 연결 문자열 보기
- 게시 프로파일 다운로드
- 배포 자격 증명 재설정
- 게시 프로파일 자격 증명 다시 설정
- 소스 제어에서 배포 설정
- Visual Studio Online에서 편집** 미리 보기
- 새 배포 슬롯 추가 미리 보기

Demo

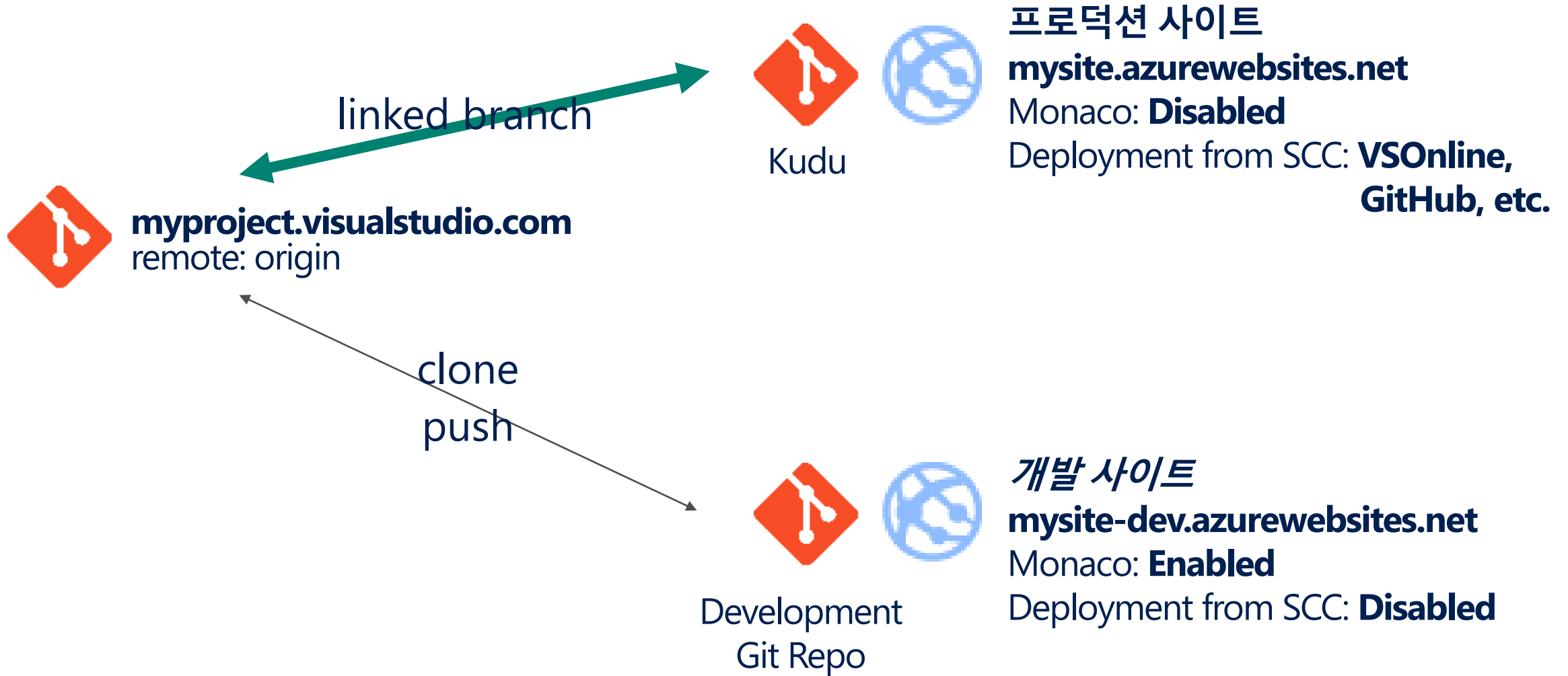
Visual Studio Online “Monaco”

ASP.NET 웹사이트 개발과 배포

개발 서버에서 프로덕션으로 배포

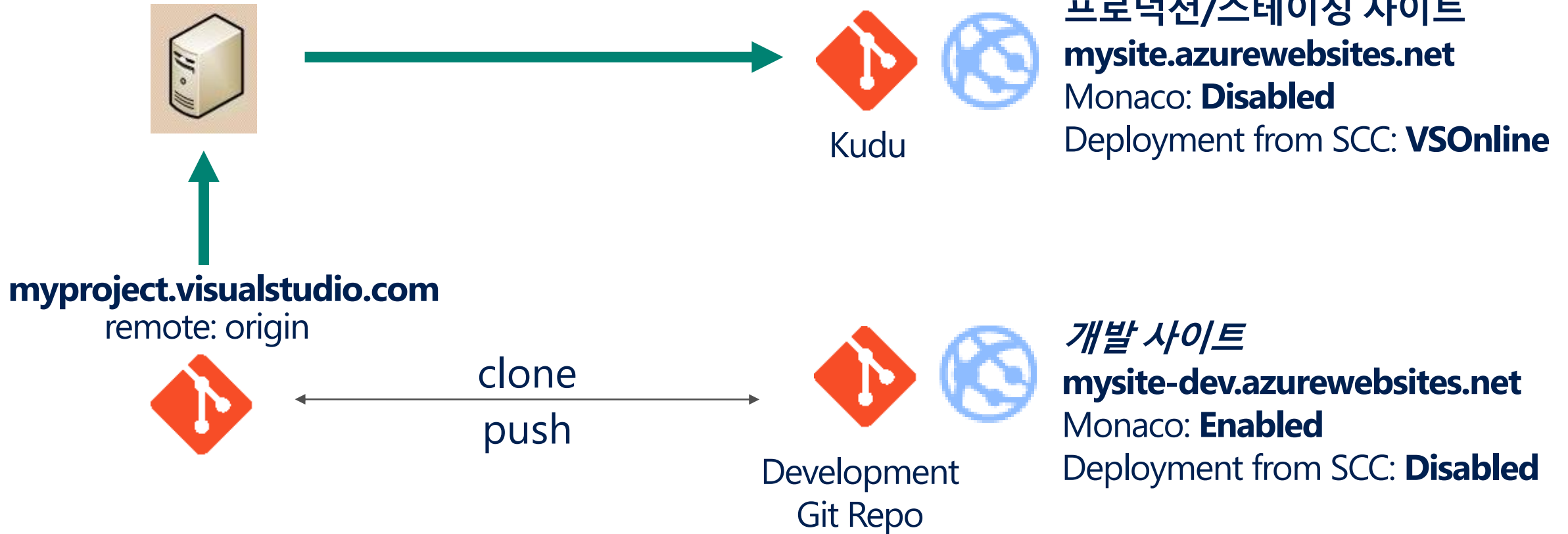


연결된 저장소에서 프로덕션으로 배포



지속적 배포

VSONline Build, Test



소스 저장소에 push 를 하면 VSO 빌드 테스트를 수행한 다음
스테이징이나 프로덕션으로 자동 배포

Demo

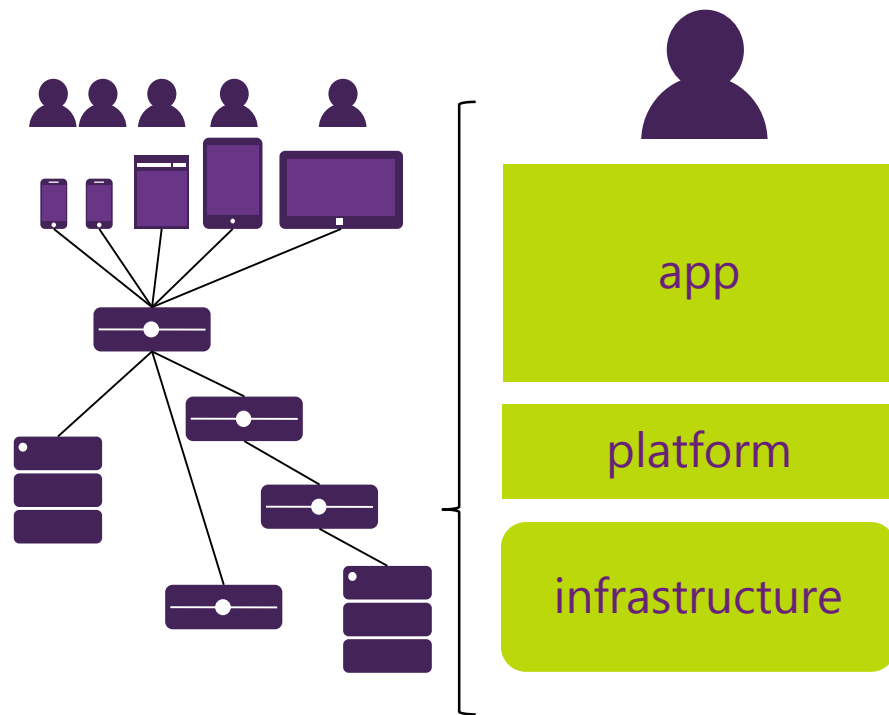
ASP.NET 웹사이트 개발과 배포

클라우드 기반의 성능 분석 도구 "Application Insights"

Microsoft MVP(ASP.NET/IIS)
한상훈

Application Insights는 무엇인가?

응용프로그램의 상태와 성능 모니터링, 그리고 사용성 분석 도구



글로벌 서버를 통한 URL ping 및 Web Test 실행

응용프로그램이 어떻게 동작하고 있는지 관찰

응용프로그램이 어떻게 사용되고 있는지 관찰

인프라 시스템 성능 카운터 수집

소스코드, 빌드, 배포 등 메타 데이터 측정

Application Insights는 무엇인가?

사용 패턴, 성능, 예외, 충돌, 이벤트, 가상 트랜잭션, 로그, 개발자가 제공한 이벤트 데이터, 등



Application Insights

Availability(가용성)

Performance(성능)

Usage(사용성)

가용성, 성능, 사용성

Application
Insight

Availability(가용성) : 응용프로그램의 서비스 가용성 모니터링
- 응용프로그램이 정상적으로 서비스되고 있는가?

Performance(성능) : 응용프로그램의 성능 문제 모니터링
- 응용프로그램이 정상적으로 작동하고 있는가?

Usage(사용성) : 응용프로그램의 사용 패턴 모니터링
- 응용프로그램을 더 유용하게 만들려면 어떻게 해야 하는가?

Application Insights의 주요 기능

관리

메뉴

Visual Studio Online / Application Insights* Sanghoon Han | Send us feedback

OVERVIEW AVAILABILITY PERFORMANCE USAGE DIAGNOSTICS

Dashboards Applications Servers Alerts Add application

My Favorites

- Td2014Gallery_ver3

Shared Favorites

- Taeyo.NET

My Dashboards

- ITist's Blog
- Td2014Gallery
- Td2014Gallery_ver2
- Td2014Gallery_ver3
- TestApp

Shared Dashboards

- Taeyo.NET

Td2014Gallery_ver3 Selected date range: Last 7 days

Summary

Active Alerts	Config Changes	Exception Events	Perf Events
2	4	22	17

Events

App Metrics

Availability	Reliability
99.9%	99.9%

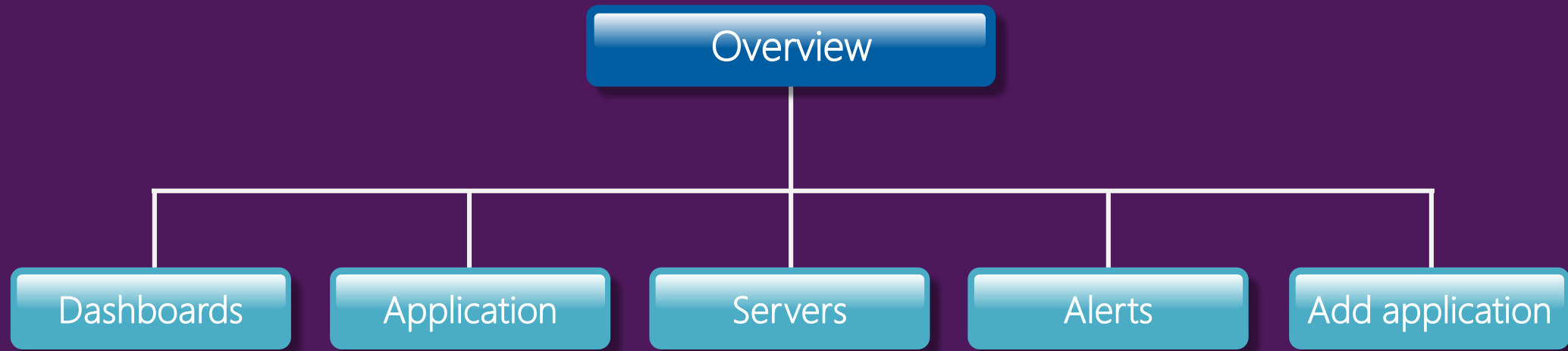
% of successful synthetic transactions

% of transactions without exceptions

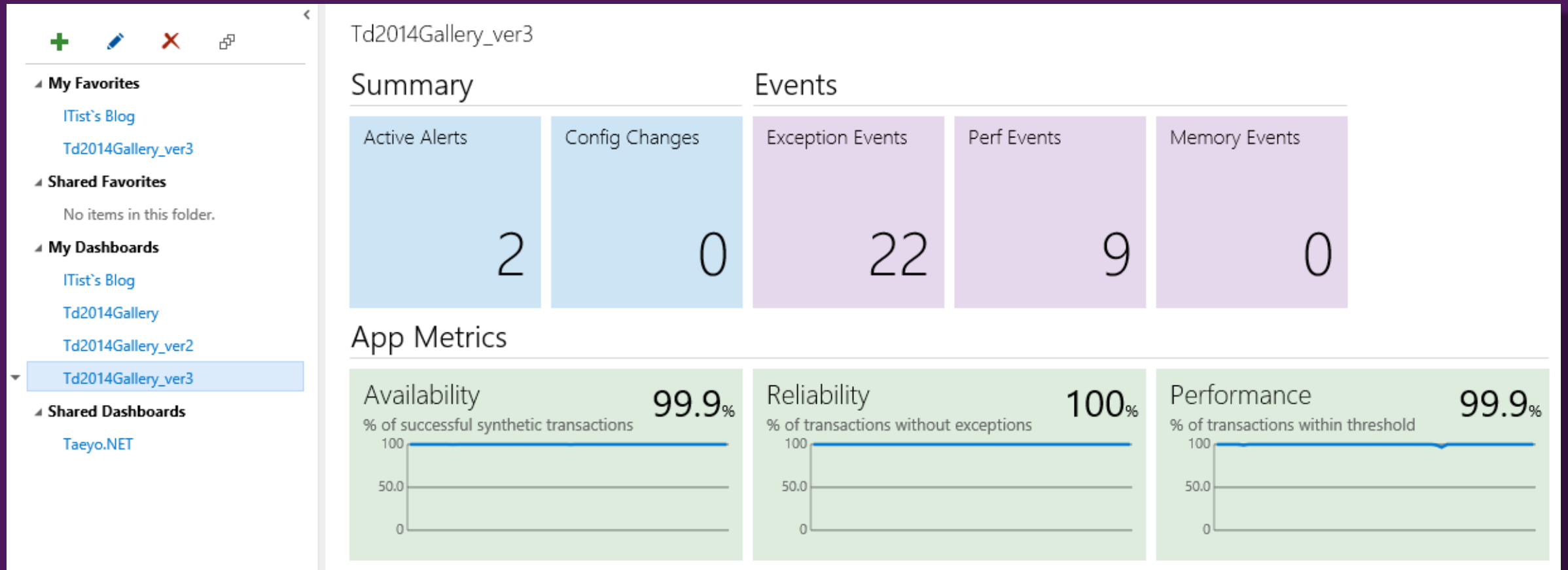
Add application

등록

Overview



Dashboards



Applications & Servers

Applications

[+ New](#) [Remove](#) [Refresh](#)

Name	Requests/Second	Response Time (Ms)	Exceptions/Second	Availability %	#Servers	#Sessions
ITist Blog	--	--	--	99.93	--	--
TaeyoNET	--	--	--	99.33	--	--
Td2014Gallery	0	17	0	99.99	--	65
TechDays2014	--	--	--	100	--	--

Servers

Filter by application

Name	Deployment ID	OS Version	Agent Version	Last Server Reported Time
td2014vm		Windows Server 2012 x64	7.1.11196.0	09/18/2014 03:14:05 PM

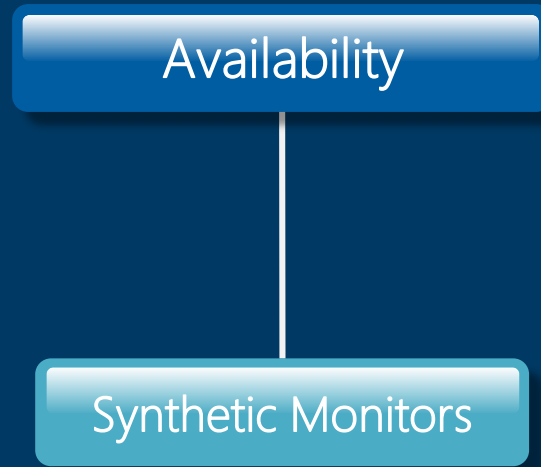
Alerts

All applications ▾ Alerts Selected date range: Last 7 days

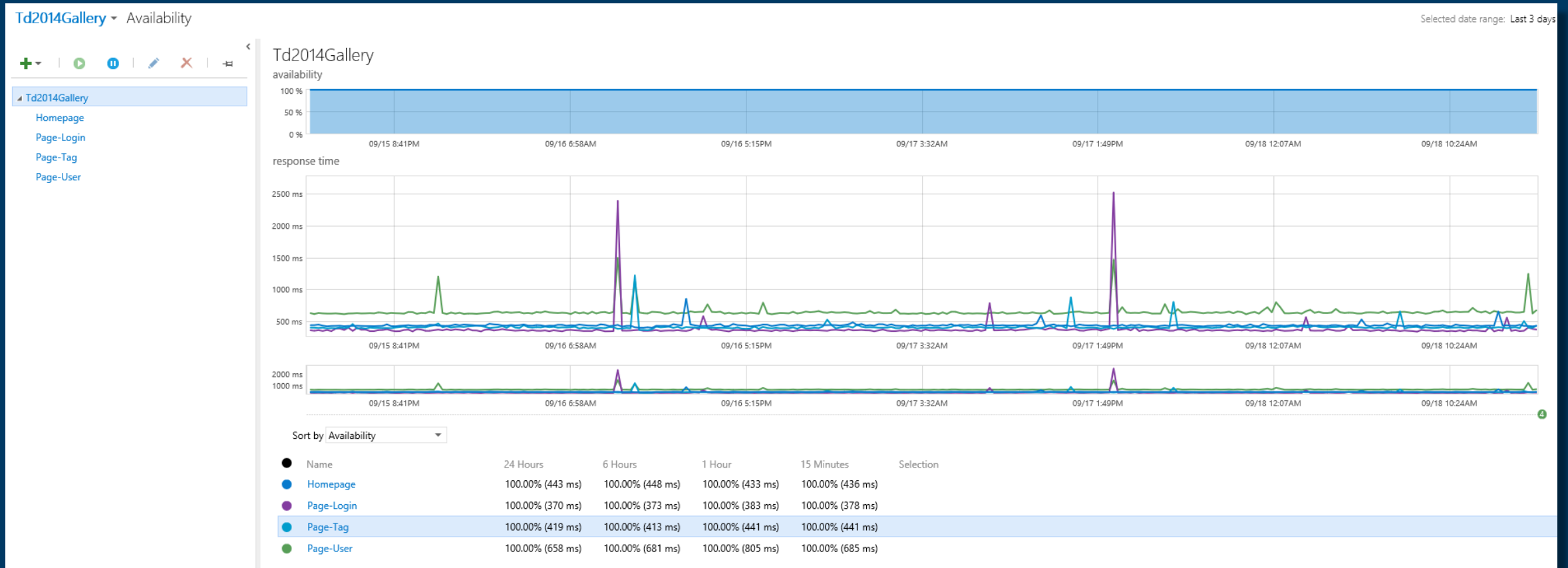
Filter by text ↻ | ⓘ Manage alert rules

History	Assessment	Since	Topic	Application
	Healthy	1 minute	Page-Tag	Td2014Gallery
	Healthy	4 minutes	Page-Login	Td2014Gallery
	Healthy	5 minutes	Page-User	Td2014Gallery
	Healthy	5 minutes	Lecture-MVC	TaeyoNET
	Healthy	5 minutes	Forum-TalkTalk	TaeyoNET
	Healthy	6 minutes	Forum-ASPNET	TaeyoNET
	Healthy	1 day 9 hours	메뉴-개발이야기	ITist Blog
	Healthy	2 days	Average Response Time	Td2014Gallery
	Healthy	3 days 10 hours	Homepage	Td2014Gallery

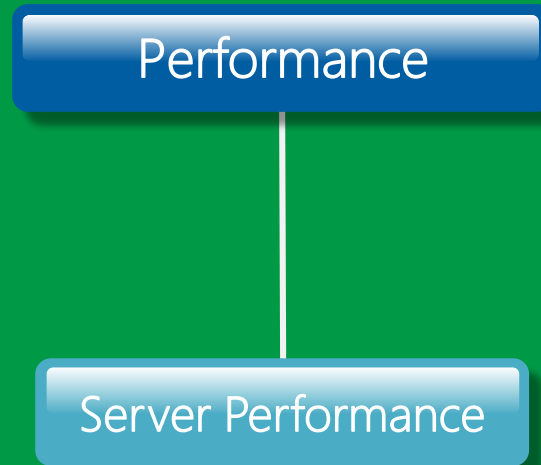
Availability



Synthetic Monitors



Performance

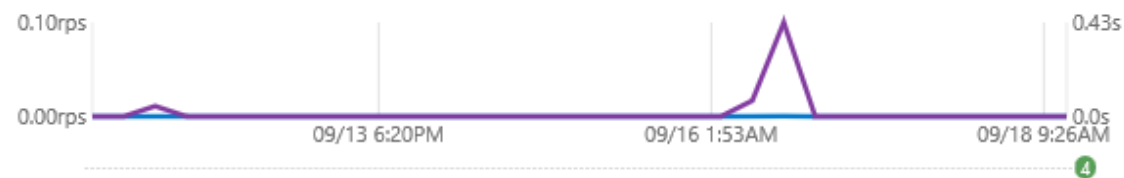
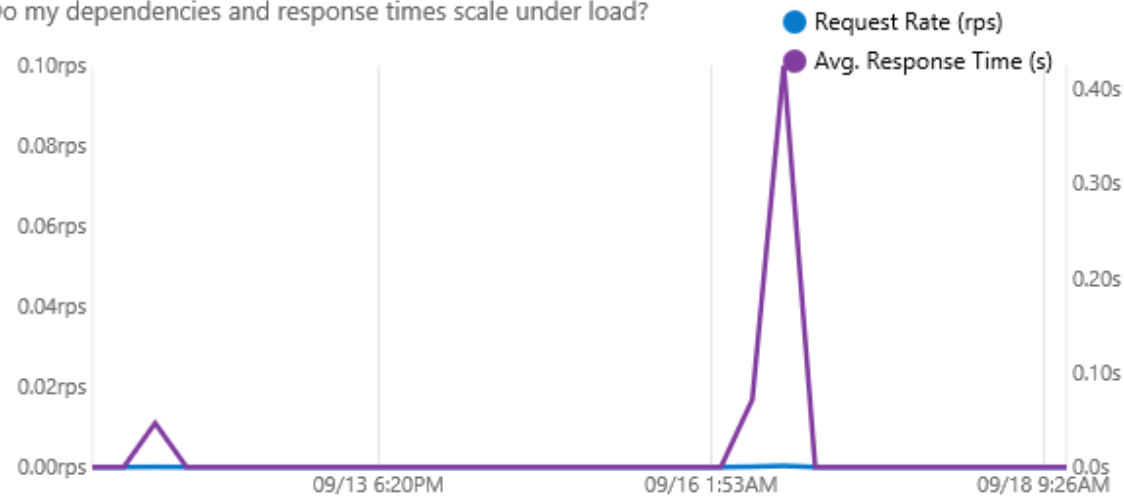


Server Performance

Td2014Gallery ▾ Server Performance

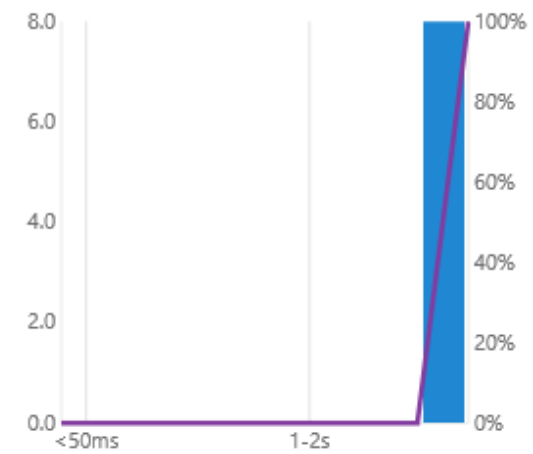
Response Time and Load vs. Dependencies

Do my dependencies and response times scale under load?



Response time distribution

How many requests have high latency?



Server Performance

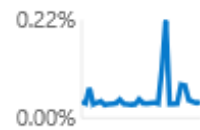
Exceptions Rate

How many exceptions are thrown per second?



CPU

How much CPU do...



Network

What is the netwo...



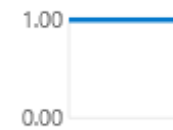
Memory In...

How much memor...



Average Ins...

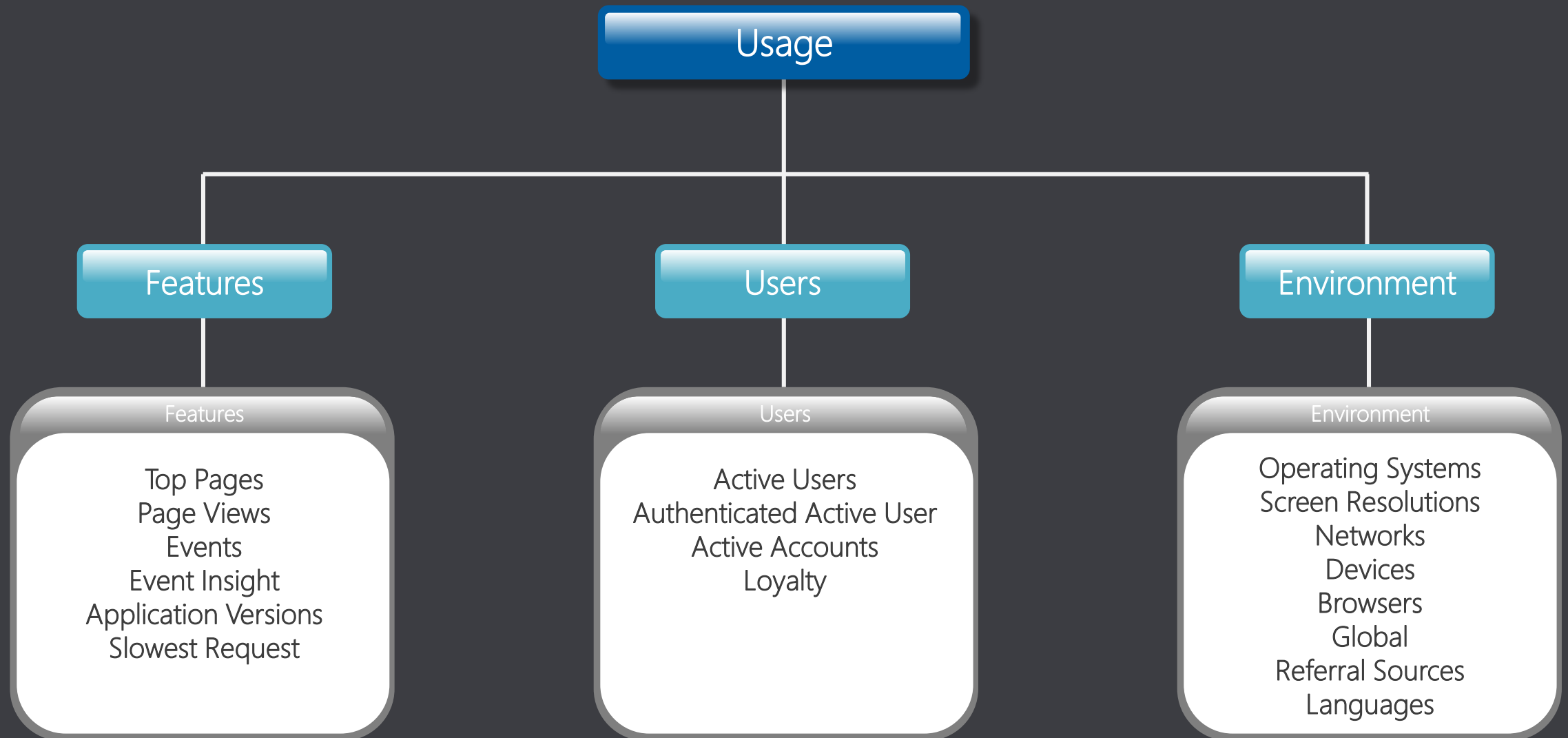
How many instanc...



Top 10 slowest requests by issue count

Description	Avg	Max	Count	Last Date	
ASP page : /delay.aspx	14.85s	15.2s	5	2014/09/16 02:34:16 PM	
ASP page : /slowresponse.aspx	29.82s	29.95s	4	2014/09/16 02:34:53 PM	

Usage

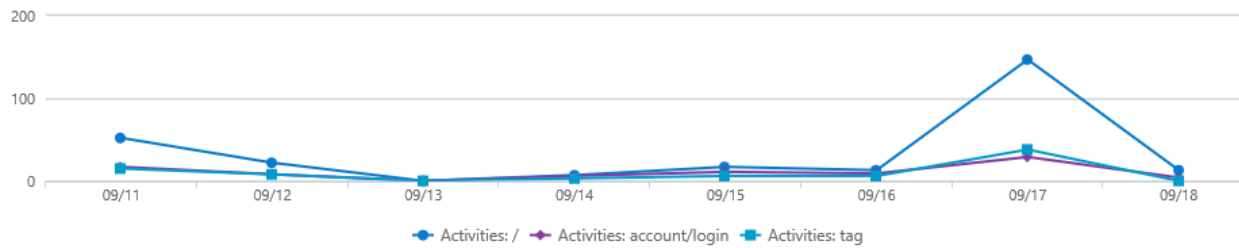


Features – Top Pages

Daily trend of users, sessions, or activity for selected features

Activities

td2014vm.cloudapp.net

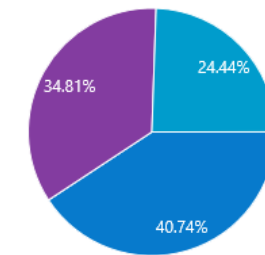


Plot

<input type="checkbox"/>	Name	Sessions	Activities
<input checked="" type="checkbox"/>	td2014vm.cloudapp.net/(default page)	55	271
<input checked="" type="checkbox"/>	td2014vm.cloudapp.net/account/login	47	84
<input checked="" type="checkbox"/>	td2014vm.cloudapp.net/tag	33	76
<input type="checkbox"/>	td2014vm.cloudapp.net/view/1	33	65
<input type="checkbox"/>	td2014vm.cloudapp.net/view/2	13	52
<input type="checkbox"/>	td2014vm.cloudapp.net/view/3	11	35
<input type="checkbox"/>	localhost:3531/(default page)	4	29
<input type="checkbox"/>	td2014vm.cloudapp.net/photo/view/3	10	24
<input type="checkbox"/>	td2014vm.cloudapp.net/photo/view/13	5	17
<input type="checkbox"/>	td2014vm.cloudapp.net/photo/view/4	10	15

Relative % of Sessions

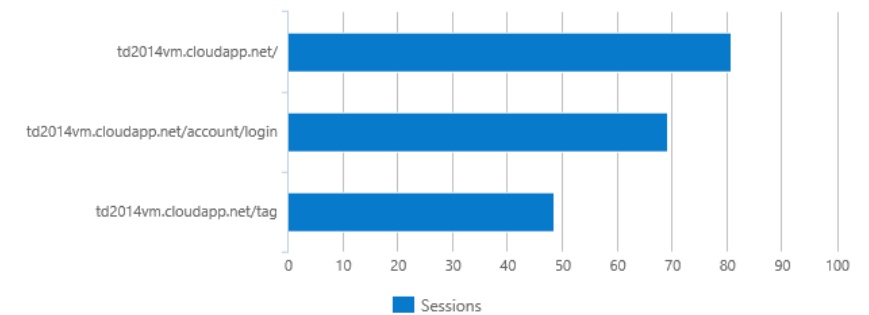
What is the % of session between the selected features?



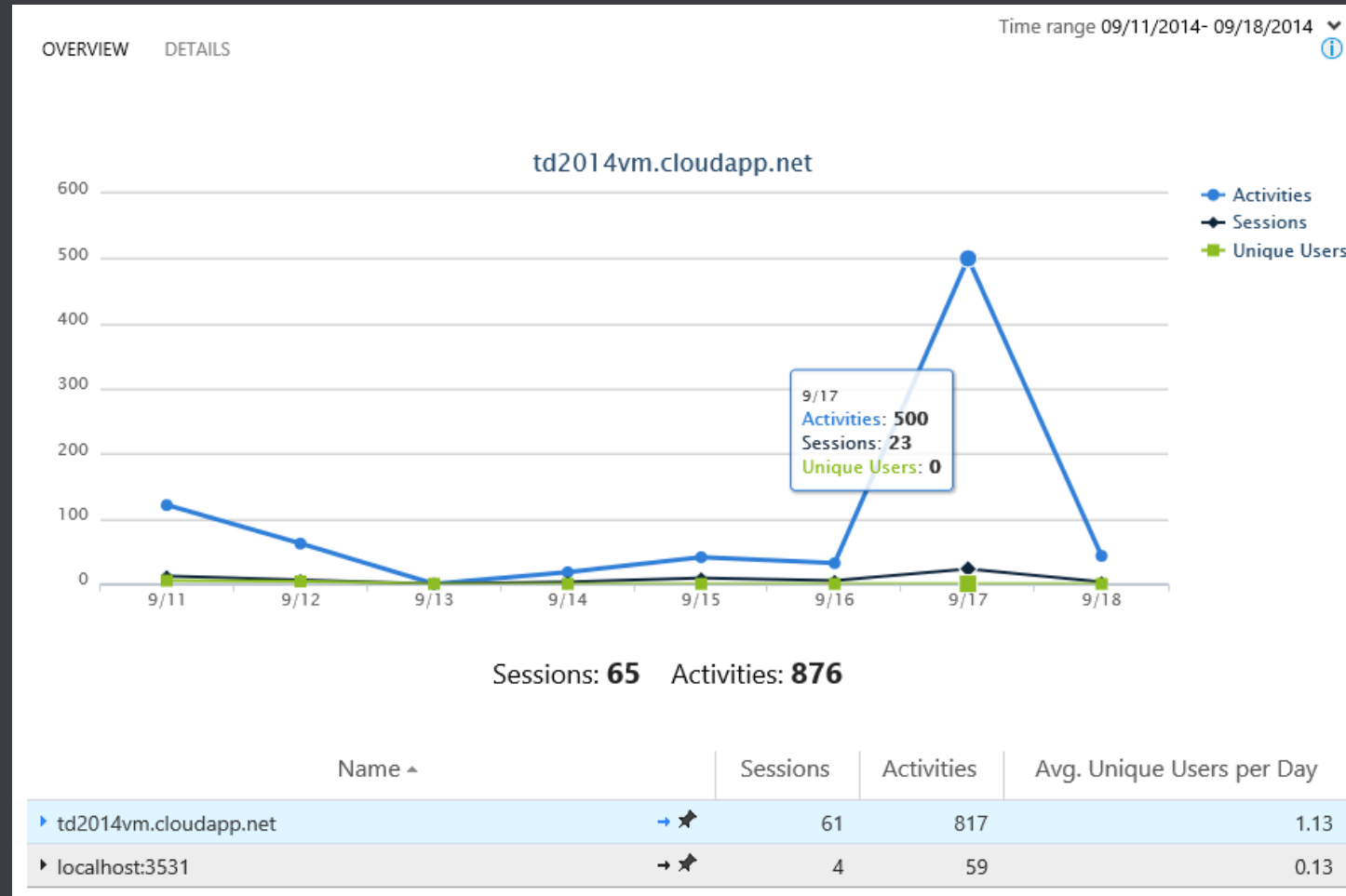
td2014vm.cloudapp.net/ td2014vm.cloudapp.net/account/login td2014vm.cloudapp.net/tag

% of Total Sessions

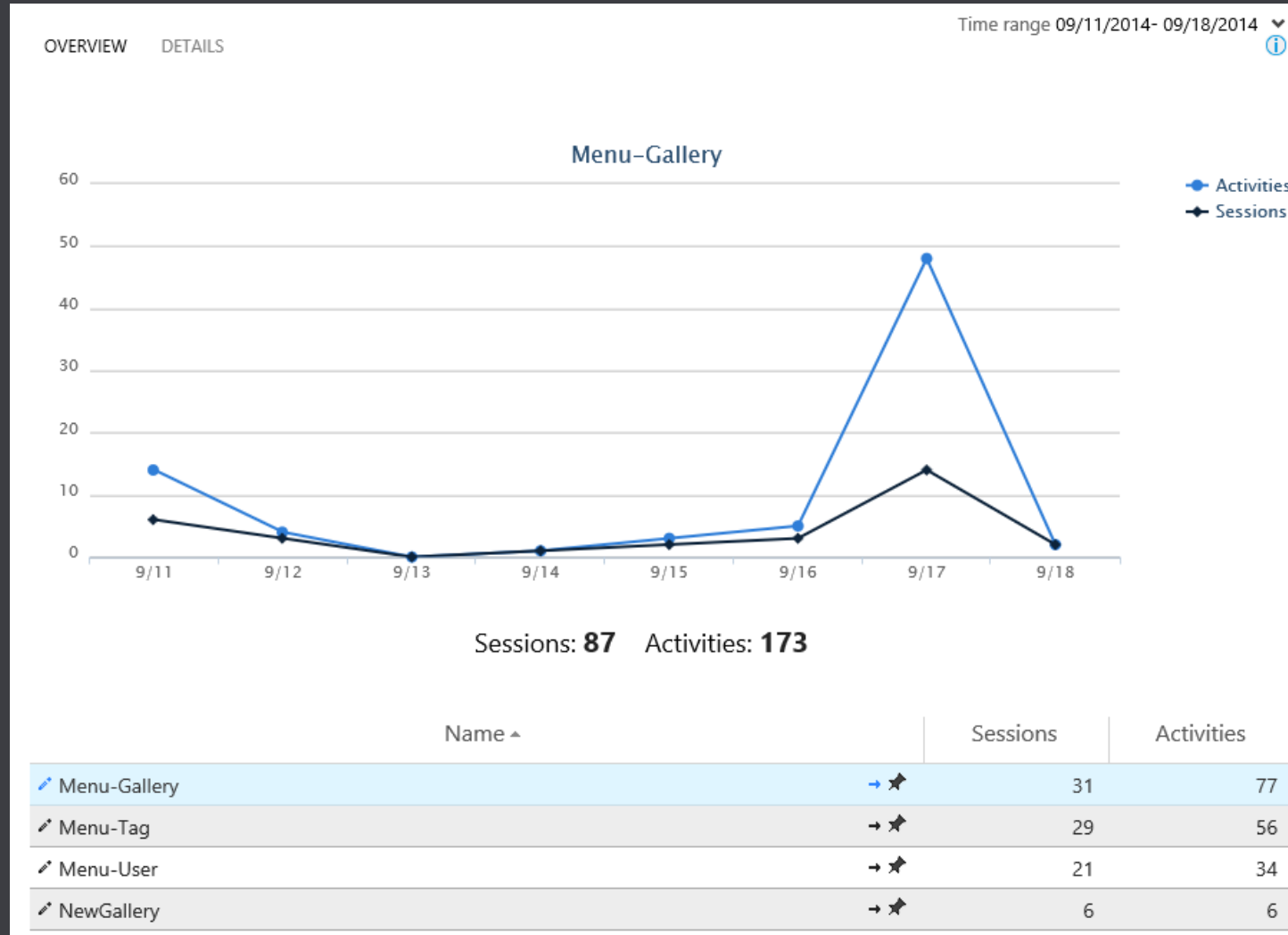
What % of user sessions have at least one view for the selected features?



Features – Page Views

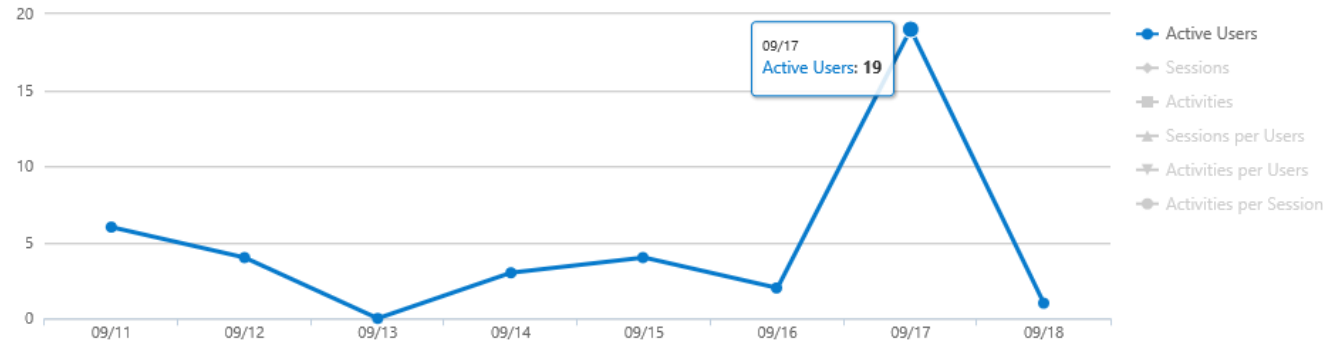


Features – Events



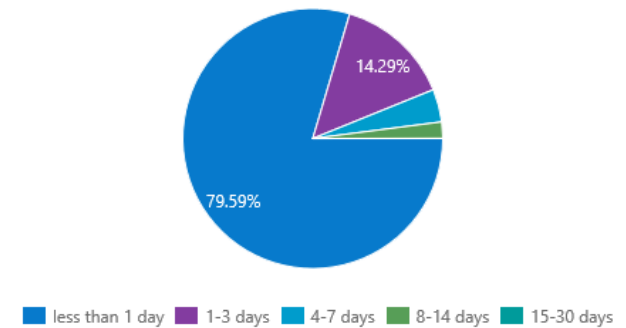
Users – Active Users

Trend of active users by day

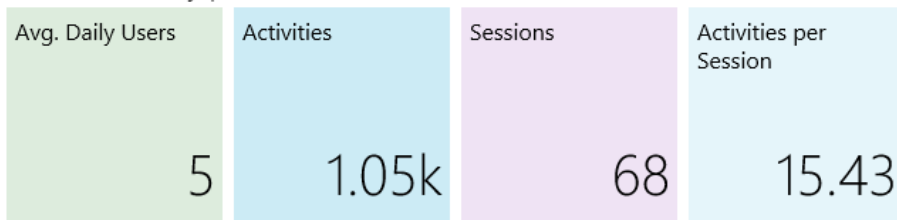


User Frequency

How long before my known users return?

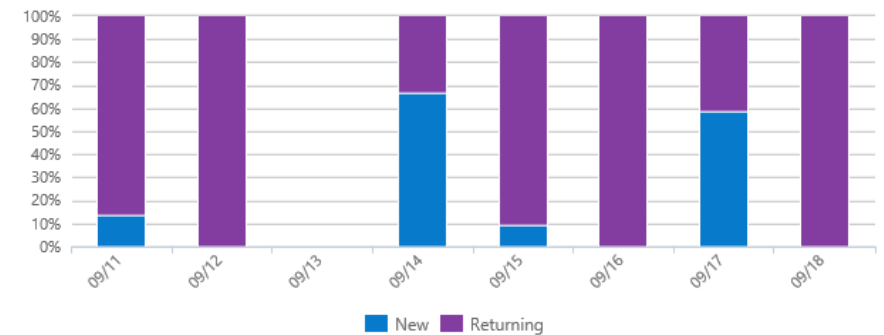


Active user key performance indicators



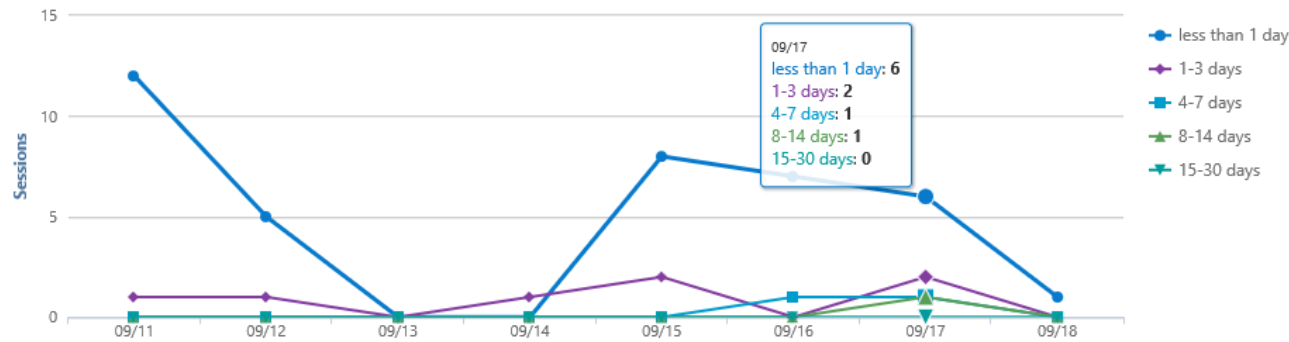
New vs. Returning

What percentage of sessions are from new users?



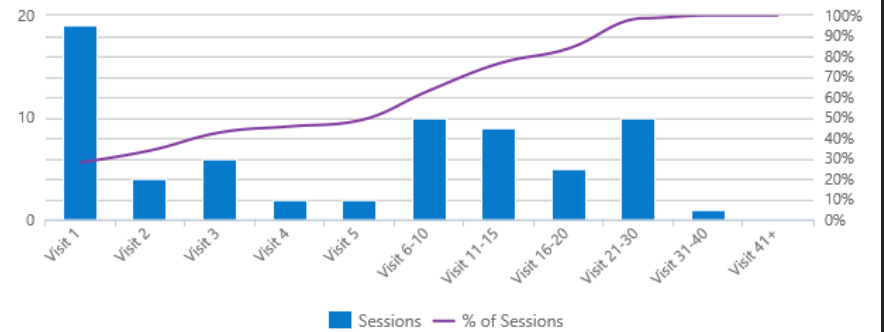
Users – Loyalty

Daily trend of how long before my users return

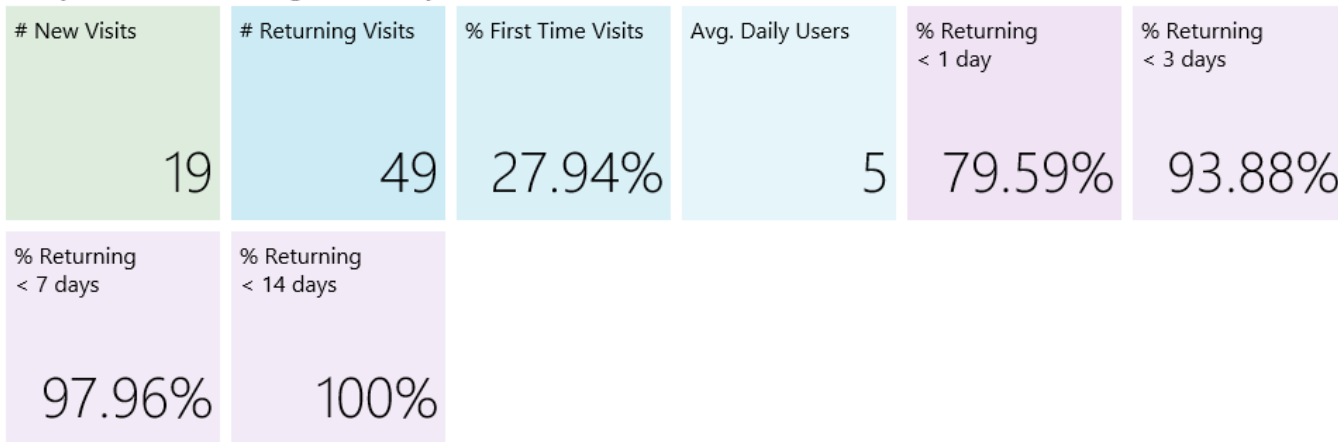


Visitor loyalty

How many users have used my app once, twice, many times?

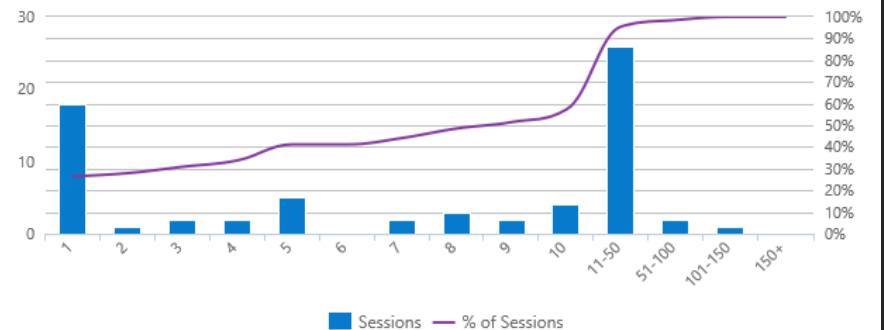


Daily trend of how long before my users return

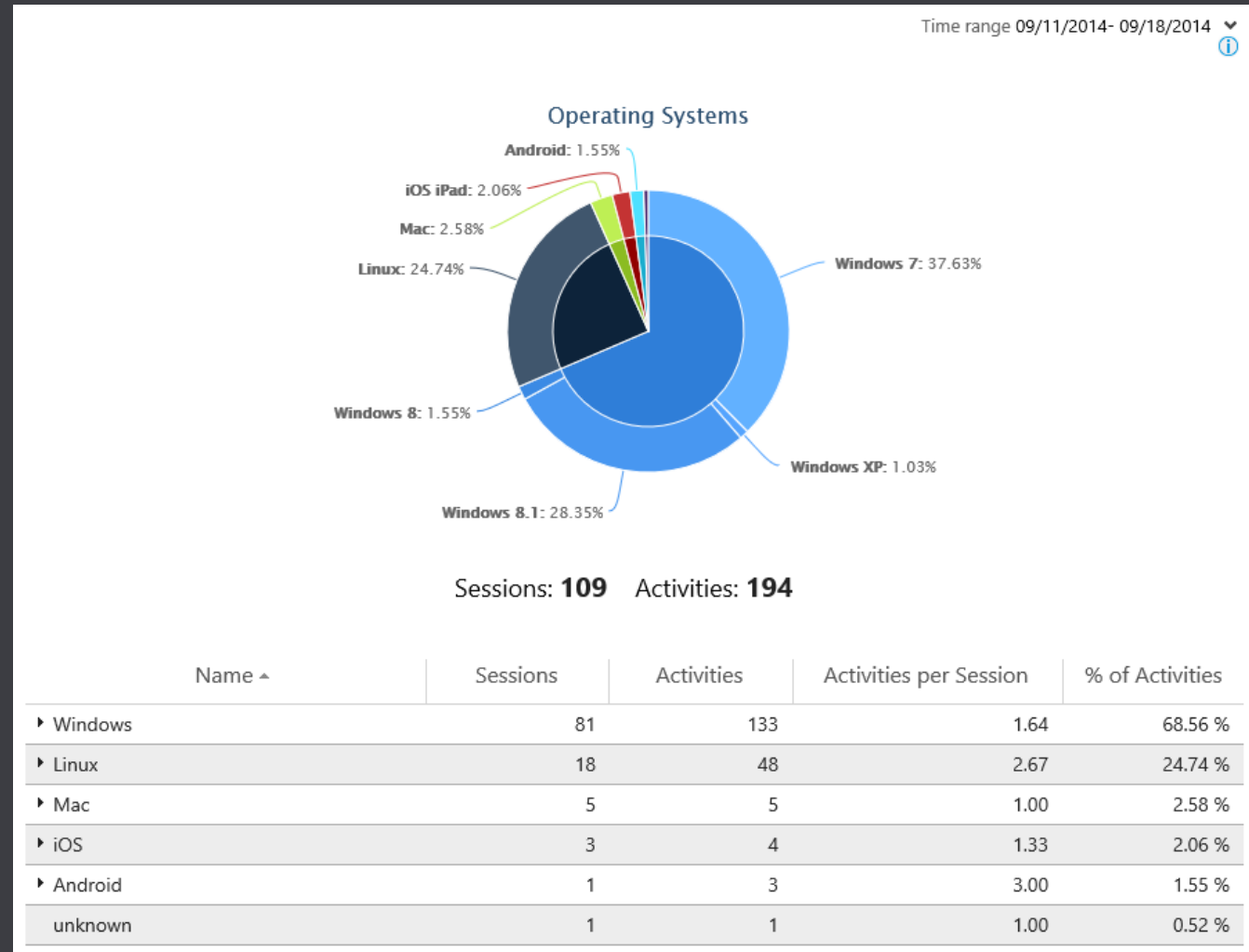


Engagement Level

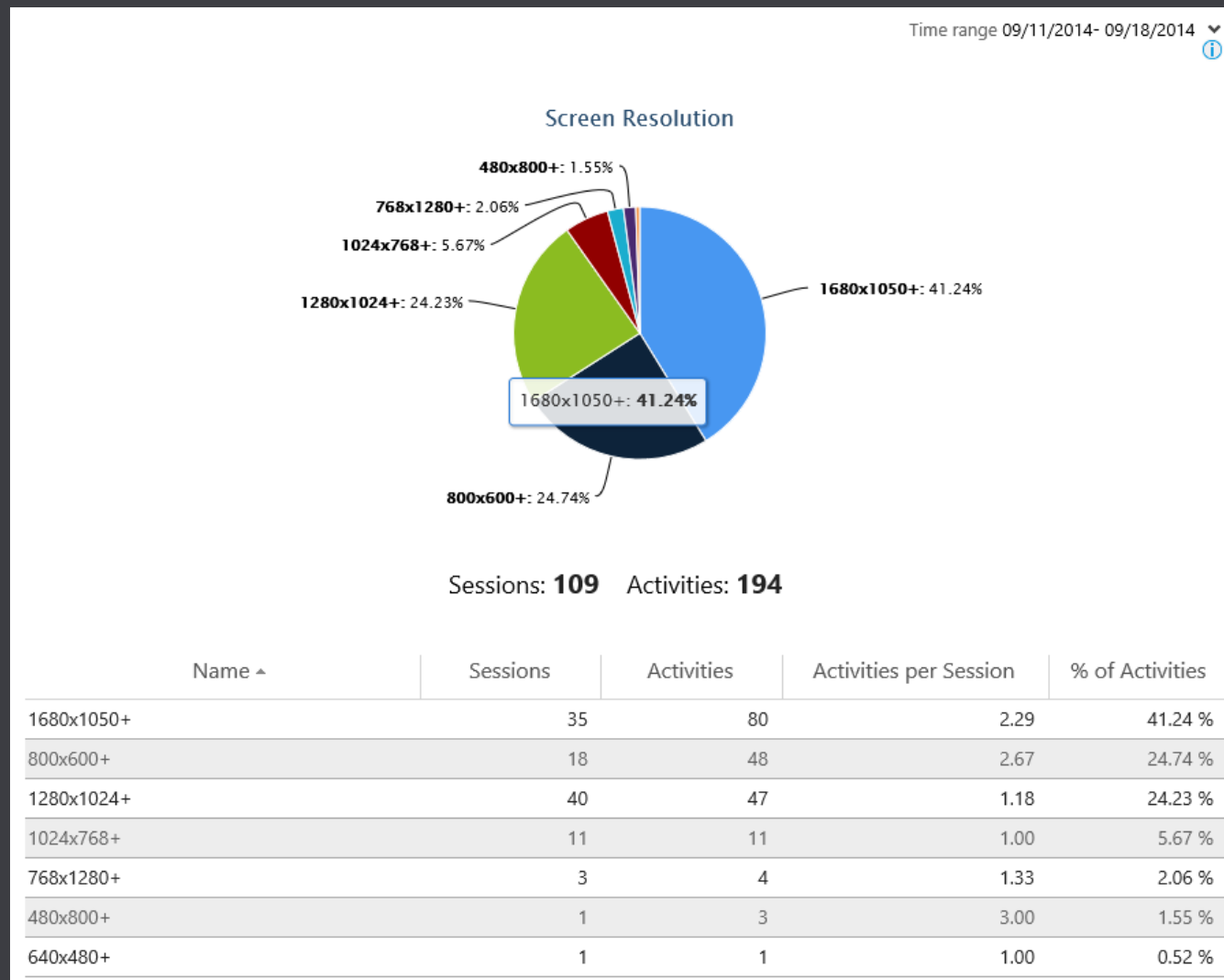
What is the distribution of activity per session?



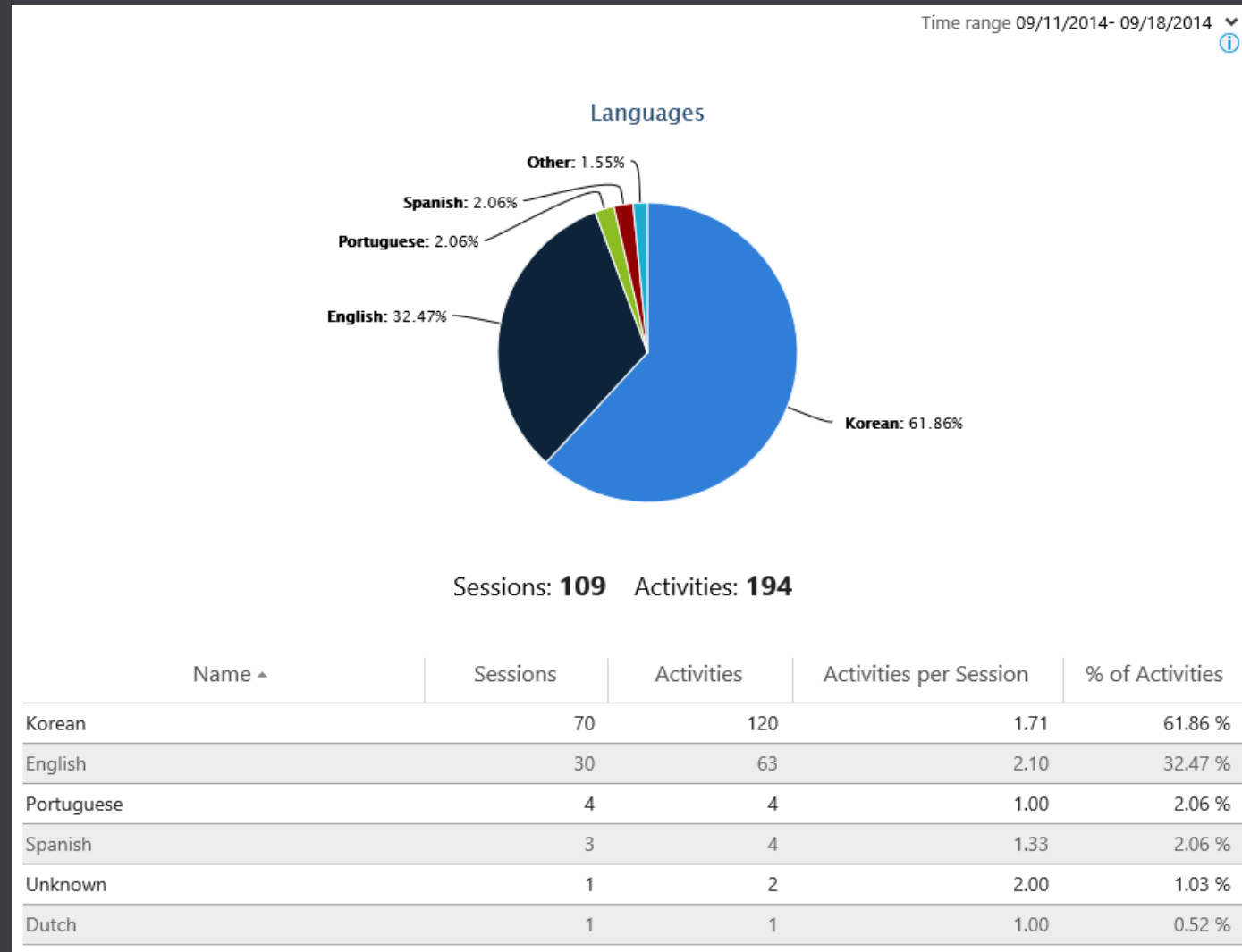
Environment - OS



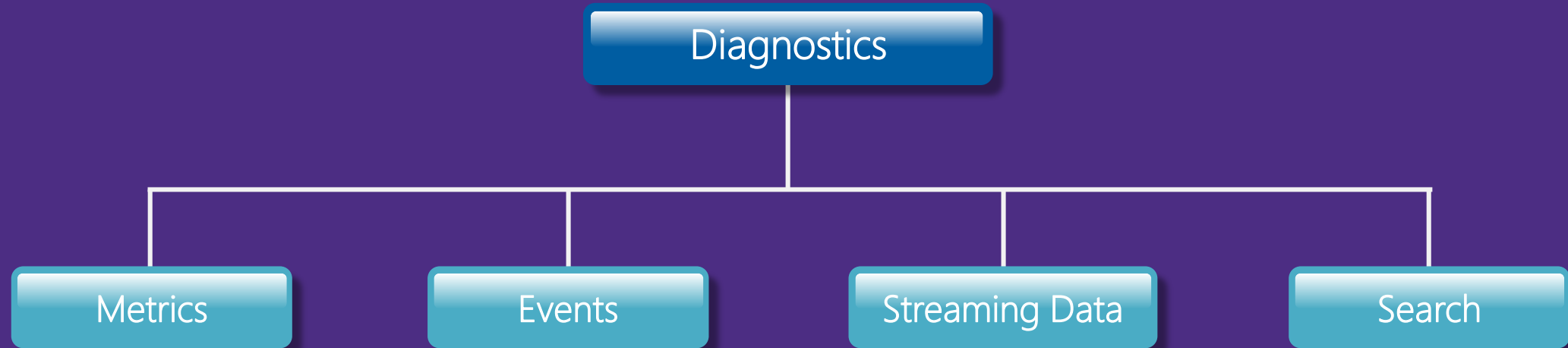
Environment – Screen Resolution



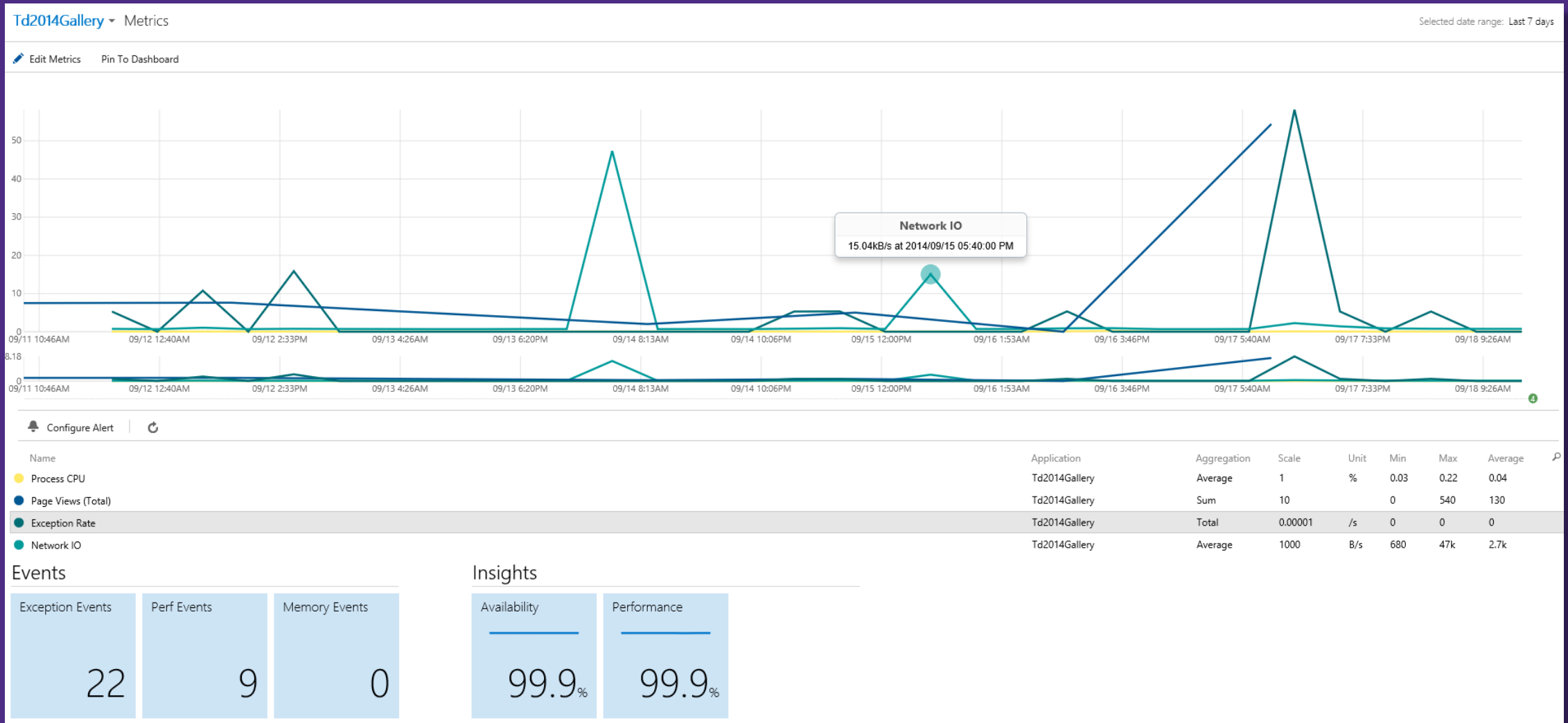
Environment – Languages



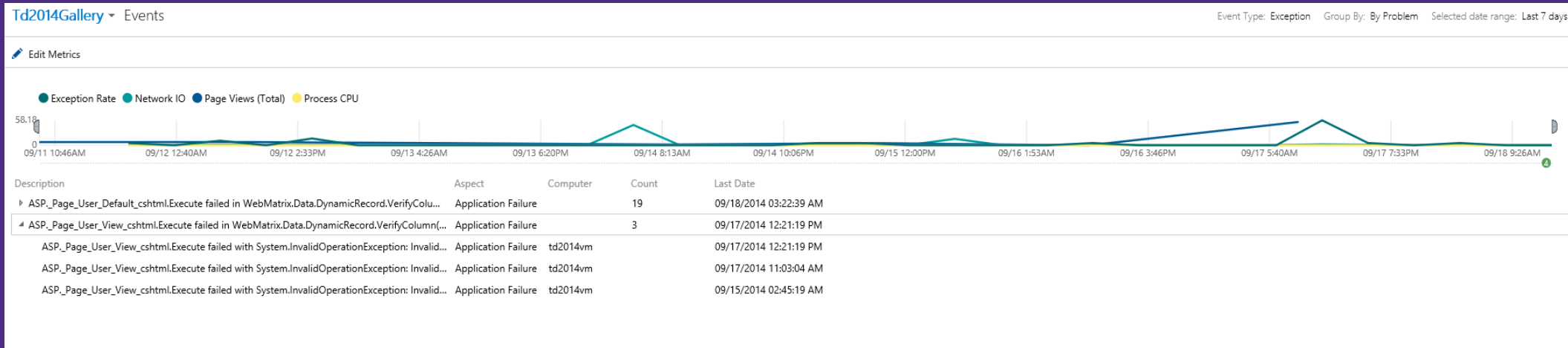
Diagnostics



Metrics



Events



EVENT DETAILS

ASP_Page_User_View_cshtml.Execute failed with System.InvalidOperationException: Invalid column name "FileTitle?".

[Event Properties](#) [Performance Counters](#)

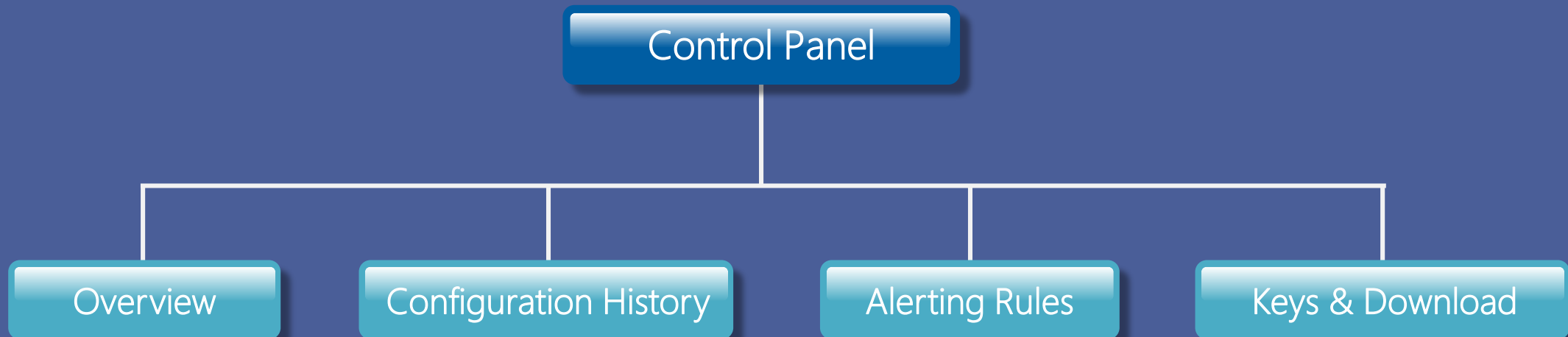
[Download IntelliTrace](#)

Application:	Td2014Gallery	Event Date:	2014-09-17 오후 12:21:19
Aspect:	ApplicationFailure	Instance Name:	td2014vm

Exception Chain

[System.InvalidOperationException:](#)
Invalid column name "FileTitle?".

Control Panel



Overview

Td2014Gallery ▾ Overview

Last successful configuration

09/18/2014 3:21:14 PM

Upload configuration
file

Upload a new configuration file for **Td2014Gallery**.

View configuration
status

See past, current and queued configuration changes and their corresponding status for **Td2014Gallery**.

Get configuration keys
and downloads

Access keys, IDs, configuration details and downloads for **Td2014Gallery**.

Enter an email address

Send notifications about this application to:

Apply

History & Alerting rules

Td2014Gallery ▾ History

Tasks

[Last successful configuration change](#)

↻ | ↑ Upload configuration | ↓ Download configuration

Title	Status	Started Date	Completed Date	🔍
▶ Monitor updated: Page-User	Complete	09/18/2014 3:20:58 PM	09/18/2014 3:21:14 PM	
▶ Monitor updated: Page-Tag	Complete	09/18/2014 3:20:05 PM	09/18/2014 3:20:53 PM	
▶ Monitor updated: Page-Login	Complete	09/18/2014 3:19:53 PM	09/18/2014 3:20:09 PM	
▶ Metric alert rule updated for Average Response Time	Complete	09/11/2014 12:00:30 AM	09/11/2014 12:00:47 AM	
▶ Monitor updated: Homepage	Complete	09/10/2014 11:57:03 PM	09/10/2014 11:57:20 PM	
▶ Monitor deleted: My first test	Complete	09/07/2014 11:50:47 PM	09/07/2014 11:51:04 PM	
▶ undefined	Complete	09/07/2014 11:50:01 PM	09/07/2014 11:50:17 PM	

Td2014Gallery ▾ Currently configured alerting rules

Application Name

Td2014Gallery

Number of rules

5

Configuration change pending

false

+ New ▾ | Edit | Delete | ↻

Rule Name	Data Source	Condition	Threshold	🔍
Homepage Availability Rule	Homepage	failed locations ≥	1	
Average Response Time metric alert rule	Average Response Time	data value ≥	10	
Page-Login Availability Rule	Page-Login	failed locations ≥	1	
Page-Tag Availability Rule	Page-Tag	failed locations ≥	1	
Page-User Availability Rule	Page-User	failed locations ≥	1	

Application Insights 설정 및 적용

Quick Start!

단계별 Q&A 방식으로 쉬운 설정 및 적용

Add application →

Would you like to collect data from a server component?

Yes

No

What technology is your application built on?

.NET Framework

Java

Do you want to monitor performance or usage?

Performance

Usage

Is your application running in Azure?

Yes

No

Does your application run in a Cloud Service or Virtual Machine?

Cloud Service

Virtual Machine

1 Confirm your application type

Running a .NET Web Application on a Windows Server? Keep going! For all other apps (including those on an Azure Cloud Service), [click here](#).

2 Name your application

TestProject

Create

3 Download the ApplicationInsights.config file and save it in your web application folder

Download
ApplicationInsights.config

Save this to your web application folder root, e.g.
C:\inetpub\wwwroot\HelloWorldApp

Skip this step if you already have ApplicationInsights.config in your application.

4 Download and Install the Microsoft Monitoring Agent onto your server

Download Microsoft Monitoring
Agent
64-bit agent

or [download the 32-bit agent](#)

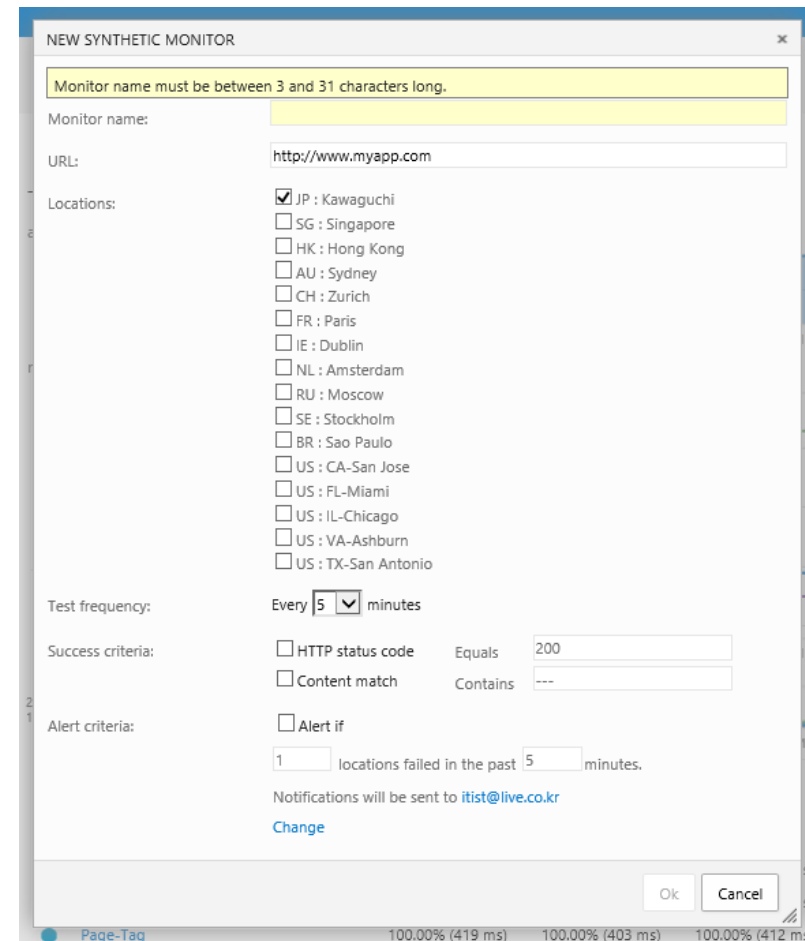
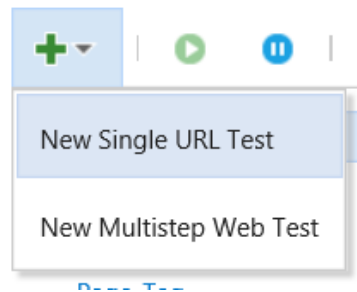
Copy the agent you just downloaded to your web server, and run the installer. When prompted for Agent Setup Options, choose Application Insights.

5 Done! You'll start seeing data in your dashboard in 5-15 minutes.

Availability 모니터링 추가

단일 URL 테스트

하나의 웹 페이지에 액세스하는 테스트

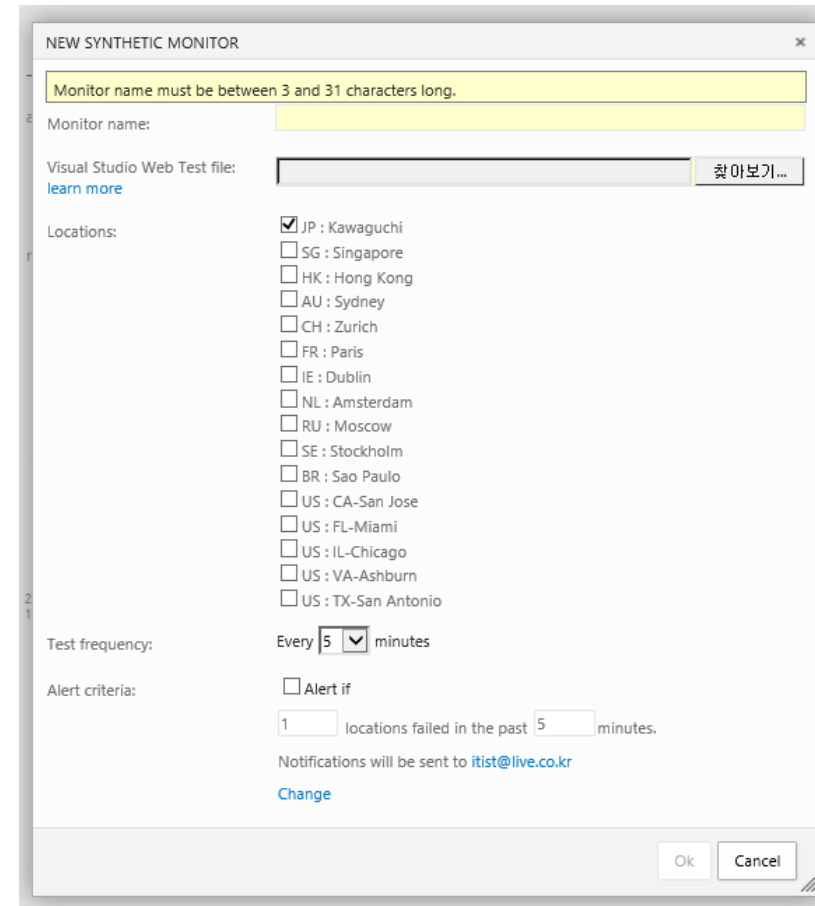
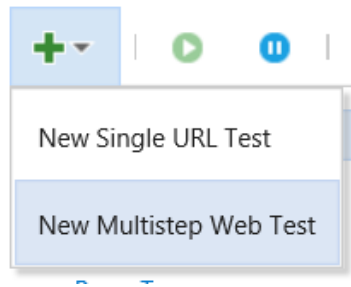


A screenshot of the 'NEW SYNTHETIC MONITOR' dialog box. The dialog box has a title bar with 'NEW SYNTHETIC MONITOR' and a close button. Below the title bar, there is a yellow warning message: 'Monitor name must be between 3 and 31 characters long.' The 'Monitor name:' field is empty. The 'URL:' field contains 'http://www.myapp.com'. The 'Locations:' section has a list of locations with checkboxes: JP : Kawaguchi (checked), SG : Singapore, HK : Hong Kong, AU : Sydney, CH : Zurich, FR : Paris, IE : Dublin, NL : Amsterdam, RU : Moscow, SE : Stockholm, BR : Sao Paulo, US : CA-San Jose, US : FL-Miami, US : IL-Chicago, US : VA-Ashburn, and US : TX-San Antonio. The 'Test frequency:' section has 'Every 5 minutes' selected. The 'Success criteria:' section has 'HTTP status code Equals 200' and 'Content match Contains ---'. The 'Alert criteria:' section has 'Alert if 1 locations failed in the past 5 minutes'. The 'Notifications will be sent to itist@live.co.kr' is displayed. At the bottom, there are 'Ok' and 'Cancel' buttons. The status bar at the bottom shows 'Page-Tag 100.00% (419 ms) 100.00% (403 ms) 100.00% (412 ms)'.

Availability 모니터링 추가

Visual Studio 웹 테스트

일련의 과정을 시뮬레이션 하는 테스트



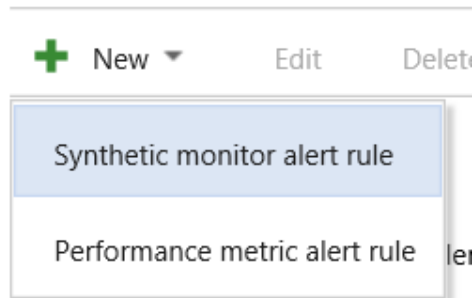
The 'NEW SYNTHETIC MONITOR' dialog box is shown. It contains the following fields and options:

- Monitor name:** A text field with a yellow background and a message: "Monitor name must be between 3 and 31 characters long."
- Visual Studio Web Test file:** A text field with a "찾아보기..." (Browse...) button and a "learn more" link.
- Locations:** A list of locations with checkboxes:
 - JP : Kawaguchi
 - SG : Singapore
 - HK : Hong Kong
 - AU : Sydney
 - CH : Zurich
 - FR : Paris
 - IE : Dublin
 - NL : Amsterdam
 - RU : Moscow
 - SE : Stockholm
 - BR : Sao Paulo
 - US : CA-San Jose
 - US : FL-Miami
 - US : IL-Chicago
 - US : VA-Ashburn
 - US : TX-San Antonio
- Test frequency:** "Every 5 minutes" (with a dropdown menu showing 5).
- Alert criteria:** "Alert if" checkbox, "1 locations failed in the past 5 minutes." (with input fields for 1 and 5).
- Notifications:** "Notifications will be sent to itist@live.co.kr" with a "Change" link.
- Buttons:** "Ok" and "Cancel" buttons at the bottom right.

경고 알림 설정

가용성 경고 설정

응답이 느린지, 잘못되었는지, 응답하지 않는지 등의 정보 알림



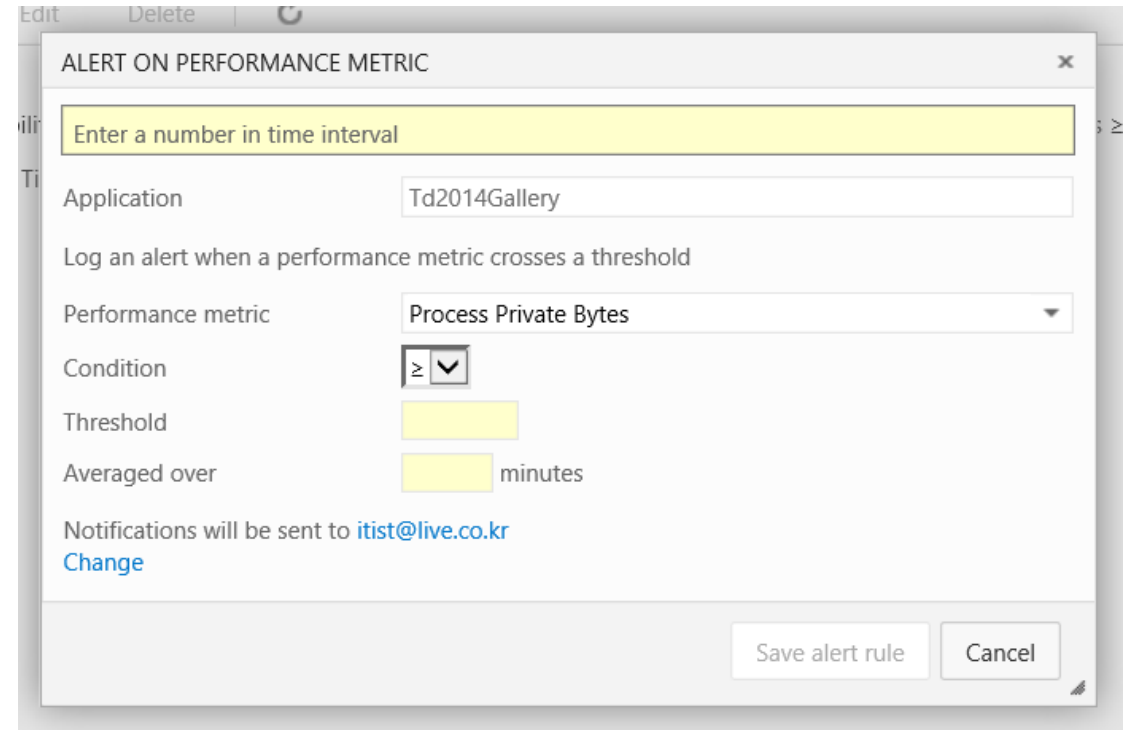
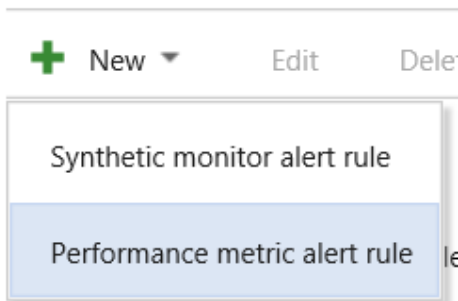
A screenshot of a dialog box titled 'ALERT ON SYNTHETIC MONITOR'. The dialog contains the following fields and options:

- A text input field with the placeholder text 'Enter a number in time interval'.
- An 'Application' dropdown menu with the value 'Td2014Gallery'.
- The text 'Log an alert on number of failed locations over a time period'.
- A 'Synthetic monitor' dropdown menu with the value 'Page-Tag'.
- A field for 'Number of failed locations >= ' with a value of '4' and the text 'out of 4'.
- A field for 'Averaged over ' with a value of ' ' and the text 'minutes'.
- The text 'Notifications will be sent to itist@live.co.kr' with a 'Change' link below it.
- Buttons for 'Save alert rule' and 'Cancel' at the bottom right.

경고 알림 설정

성능 경고 설정

다양한 성능 카운터 수집 데이터가 정의된 임계값을 초과할 때 알림



A screenshot of a configuration dialog titled 'ALERT ON PERFORMANCE METRIC'. The dialog has a close button (X) in the top right corner. It contains the following fields and options:

- A yellow highlighted input field with the placeholder text 'Enter a number in time interval'.
- 'Application' field with the value 'Td2014Gallery'.
- Text: 'Log an alert when a performance metric crosses a threshold'.
- 'Performance metric' dropdown menu with 'Process Private Bytes' selected.
- 'Condition' dropdown menu with '≥' selected.
- 'Threshold' field with a yellow highlighted input area.
- 'Averaged over' field with a yellow highlighted input area and the text 'minutes'.
- Text: 'Notifications will be sent to itist@live.co.kr' with a 'Change' link below it.
- 'Save alert rule' and 'Cancel' buttons at the bottom right.

Demo

Application Insights!

피가 되고 살이 되는 Tip!

- 데이터가 정상적으로 표시되지 않는다면?
 - 구성 요소 ID를 포함한 소스 코드를 올바르게 적용했는지 확인.
 - 응용프로그램이 실제로 사용되기 전에는 데이터가 표시되지 않음.
 - 최초 데이터가 표시될 때까지 최대 30분까지도 소요될 수 있음.
 - 시간 범위 설정에 오늘 날짜가 포함되어 있는지 확인.
- 보고서에 표시된 것보다 많은 예외 및 성능 이슈가 발생한다면?
 - 응용프로그램 성능에 영향을 주지 않기 위해 이벤트 보고서가 제한됨.
 - 1분에 보고되는 한 종류의 이벤트는 3개 이하로 제한됨.

참고 자료

- Visual Studio Online
 - <http://www.visualstudio.com/products/what-is-visual-studio-online-vs>
- Visual Studio Online "Monaco" | Channel 9
 - <http://channel9.msdn.com/Series/Visual-Studio-Online-Monaco>
- Visual Studio Online "Monaco" Blog
 - <http://blogs.msdn.com/b/monaco/>
- Application Insights for Visual Studio Online
 - <http://msdn.microsoft.com/ko-kr/library/dn481095.aspx>
- Monitoring, Measuring, and Learning for Continuous Improvement
 - <https://jfattic.wordpress.com/author/jfattic>

감사합니다!

