이 발표 자료에는 네이버에서 제공한 나눔 고딕 글꼴이 적용되어 있습니다.

Photo by FadiXd on Unsplash

.NET Conf 2022 x Seoul

풀 스택과 사랑에 빠질 준비, 되셨나요?

.Net Dev

Azure Application Insights

최영선
(yeongsoen.choe@gmail.com)

목차

- 발표자 소개
- Application Insights 소개
- Application Insights 데모

발표자 소개

최영선 (마이크로소프트 CSS)

Azure Web Services (Web App, Function APP)

Application Insights

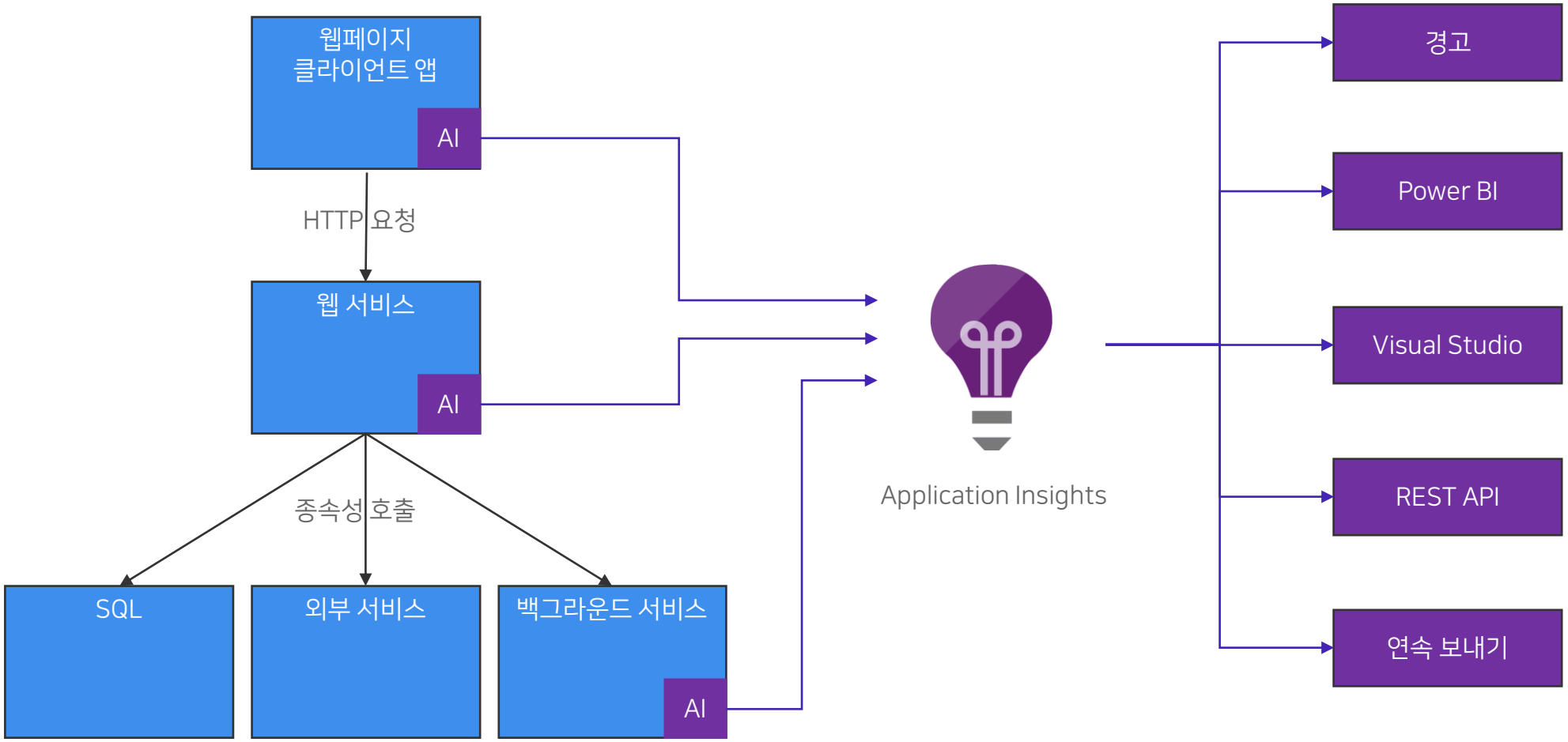
Application Insights 란?

- 개발자 및 DevOps 전문가를 위한 확장 가능한 **APM (애플리케이션 성능 관리)** 서비스

- 성능 이상을 자동으로 감지하고, 문제를 진단하고 사용자가 실제로 앱을 사용하여 수행하는 작업을 파악할 수 있는 **강력한 분석 도구**

- 온-프레미스, 하이브리드 또는 퍼블릭 클라우드에서 호스팅되는 .NET, Node.js, Java 및 Python을 포함하여 다양한 플랫폼의 앱에서 작동

Application Insights의 작동 방식

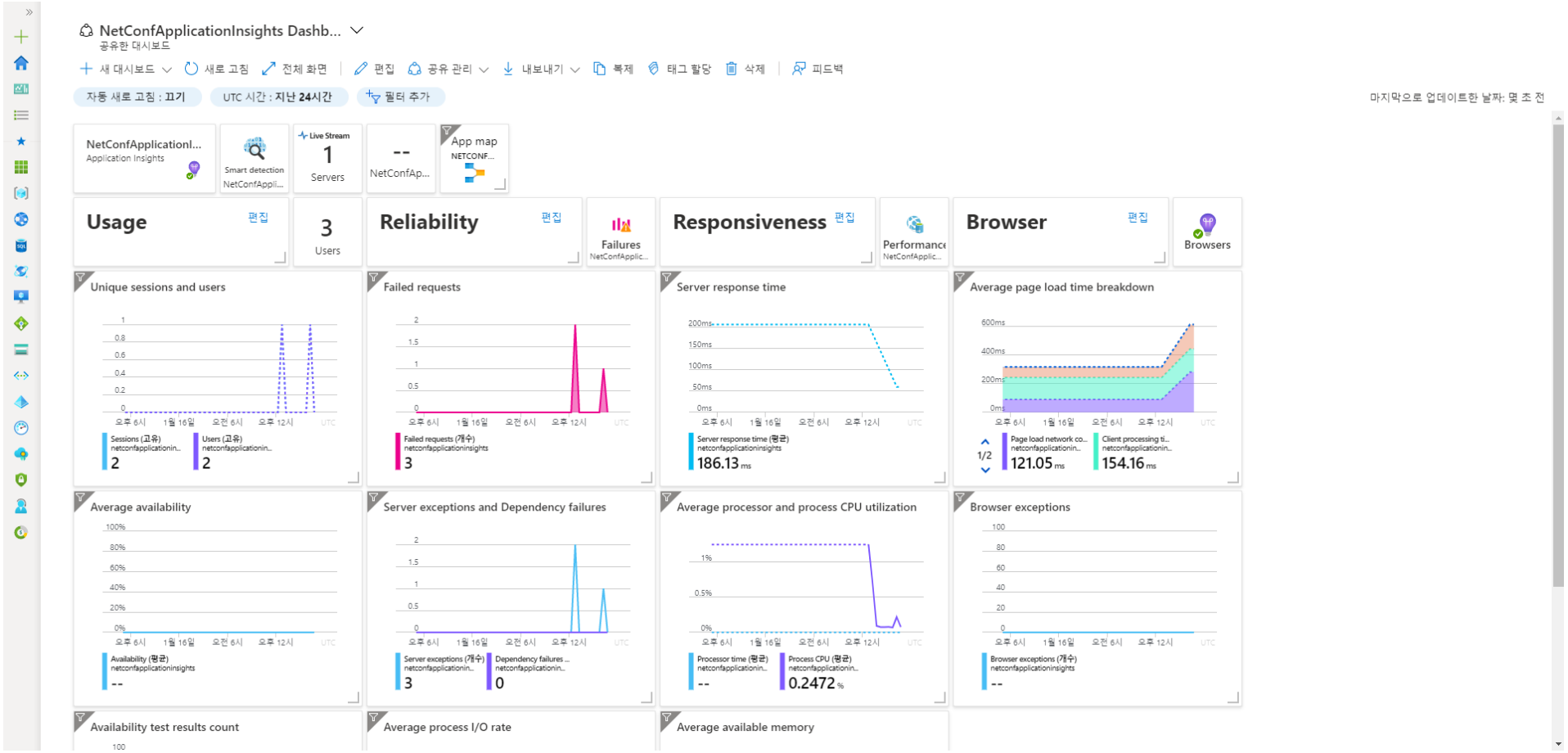


무엇을 모니터링하나요?

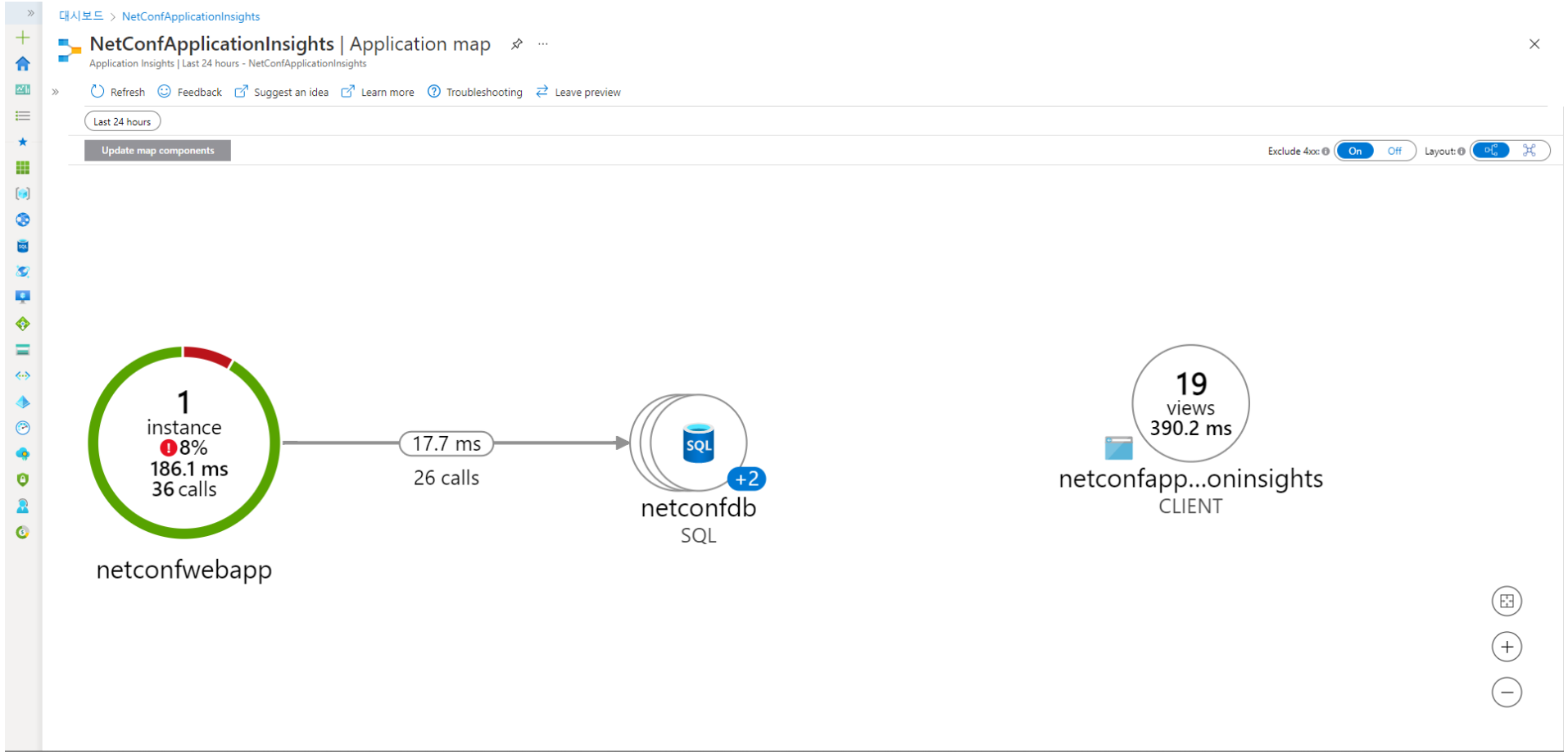
- 요청 속도, 응답 시간 및 실패율
- 종속성 비율, 응답 시간 및 실패율
- 예외
- 페이지 보기 및 로드 성능
- 사용자 및 세션 수
- **AJAX** 호출
- 성능 카운터
- 호스트 진단
- 진단 추적 로그
- 사용자 지정 이벤트 및 메트릭

Application Insights 구성요소

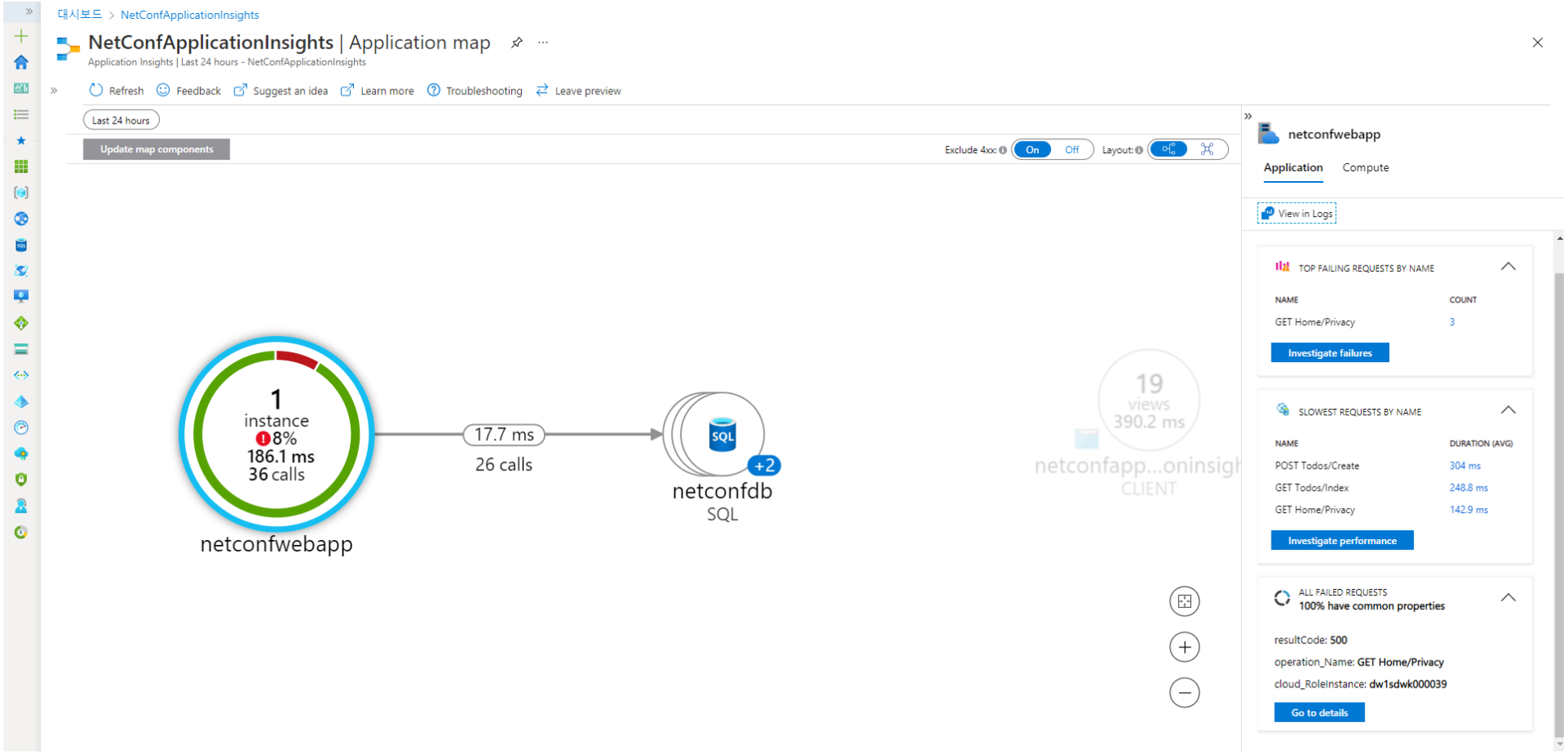
대시보드


NetConfApplicationInsights Dashb...
공유한 대시보드
새 대시보드
새로 고침
전체 화면
편집
공유 관리
내보내기
복제
태그 할당
삭제
피드백
자동 새로 고침 : 끄기
UTC 시간 : 지난 24시간
필터 추가
마지막으로 업데이트한 날짜: 몇 초 전
NetConfApplicationI...
Application Insights
Smart detection
NetConfAppli...
Live Stream
1
Servers
--
NetConfAp...
App map
NETCONF...
Usage
편집
3
Users
Reliability
편집
Failures
NetConfApplic...
Responsiveness
편집
Performance
NetConfApplic...
Browser
편집
Browsers
Unique sessions and users
Sessions (고유)
netconfapplicationin...
2
Users (고유)
netconfapplicationin...
2
Failed requests
Failed requests (개수)
netconfapplicationinsights
3
Server response time
Server response time (평균)
netconfapplicationinsights
186.13 ms
Average page load time breakdown
1/2
Page load network co...
netconfapplicationin...
121.05 ms
Client processing ti...
netconfapplicationin...
154.16 ms
Average availability
Availability (평균)
netconfapplicationinsights
--
Server exceptions and Dependency failures
Server exceptions (개수)
netconfapplicationin...
3
Dependency failures ...
netconfapplicationin...
0
Average processor and process CPU utilization
Processor time (평균)
netconfapplicationin...
--
Process CPU (평균)
netconfapplicationin...
0.2472 %
Browser exceptions
Browser exceptions (개수)
netconfapplicationinsights
--
Availability test results count
Average process I/O rate
Average available memory

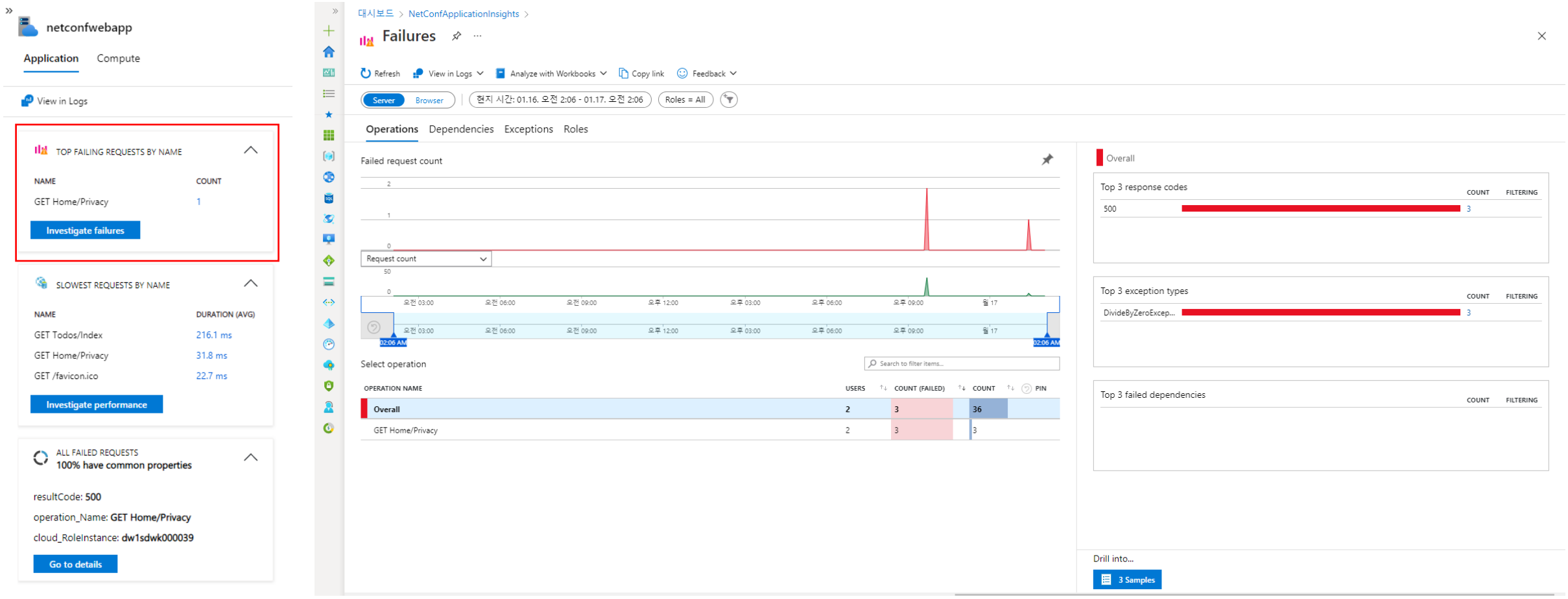
애플리케이션 맵


대시보드 > NetConfApplicationInsights
NetConfApplicationInsights | Application map
Application Insights | Last 24 hours - NetConfApplicationInsights
Refresh
Feedback
Suggest an idea
Learn more
Troubleshooting
Leave preview
Last 24 hours
Update map components
Exclude 4xx:
On
Off
Layout:
1
instance
8%
186.1 ms
36 calls
netconfwebapp
17.7 ms
26 calls
SQL
+2
netconfdb
SQL
19
views
390.2 ms
netconfapp...oninsights
CLIENT

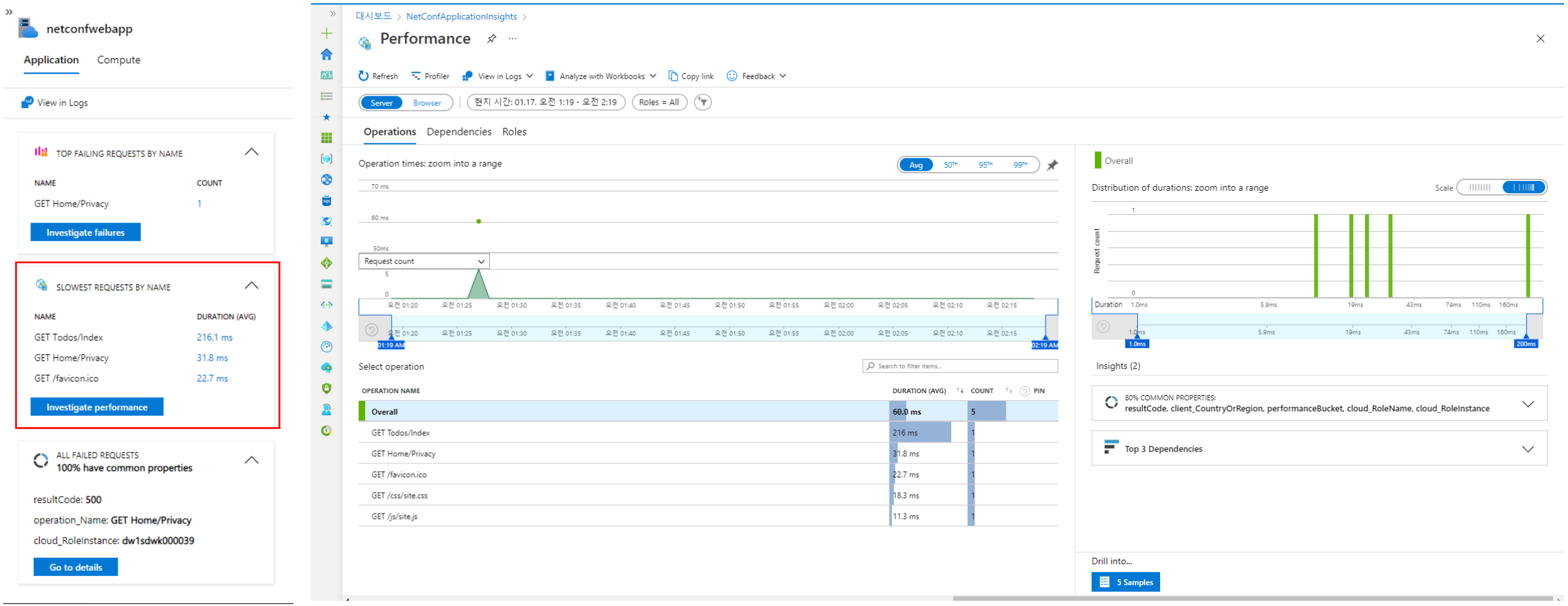
어플리케이션 맵


대시보드 > NetConfApplicationInsights
NetConfApplicationInsights | Application map
Application Insights | Last 24 hours - NetConfApplicationInsights
Refresh
Feedback
Suggest an idea
Learn more
Troubleshooting
Leave preview
Last 24 hours
Update map components
Exclude 4xx: On Off
Layout:
1
instance
8%
186.1 ms
36 calls
netconfwebapp
17.7 ms
26 calls
SQL
+2
netconfdb
SQL
19
views
390.2 ms
CLIENT
netconfwebapp
Application
Compute
View in Logs
TOP FAILING REQUESTS BY NAME
NAME
COUNT
GET Home/Privacy
3
Investigate failures
SLOWEST REQUESTS BY NAME
NAME
DURATION (AVG)
POST Todos/Create
304 ms
GET Todos/Index
248.8 ms
GET Home/Privacy
142.9 ms
Investigate performance
ALL FAILED REQUESTS
100% have common properties
resultCode: 500
operation_Name: GET Home/Privacy
cloud_RoleInstance: dw1sdwk000039
Go to details

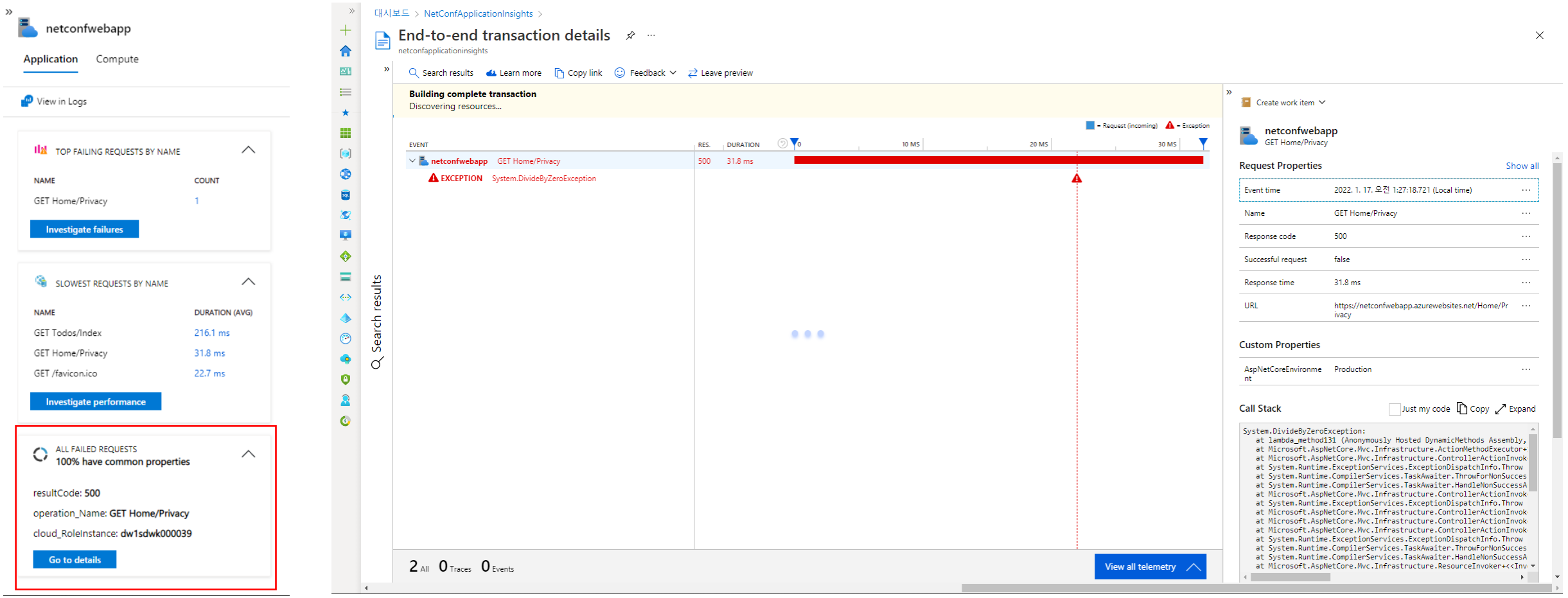
오류조사


netconfwebapp
Application
Compute
View in Logs
TOP FAILING REQUESTS BY NAME
NAME
COUNT
GET Home/Privacy
1
Investigate failures
SLOWEST REQUESTS BY NAME
NAME
DURATION (AVG)
GET Todos/Index
216.1 ms
GET Home/Privacy
31.8 ms
GET /favicon.ico
22.7 ms
Investigate performance
ALL FAILED REQUESTS
100% have common properties
resultCode: 500
operation_Name: GET Home/Privacy
cloud_RoleInstance: dw1sdwk000039
Go to details
대시보드 > NetConfApplicationInsights >
Failures
Refresh
View in Logs
Analyze with Workbooks
Copy link
Feedback
Server
Browser
현지 시간: 01.16. 오전 2:06 - 01.17. 오전 2:06
Roles = All
Operations
Dependencies
Exceptions
Roles
Failed request count
Request count
Select operation
Search to filter items...
OPERATION NAME
USERS
COUNT (FAILED)
COUNT
PIN
Overall
2
3
36
GET Home/Privacy
2
3
3
Overall
Top 3 response codes
COUNT
FILTERING
500
3
Top 3 exception types
DivideByZeroExcep...
Top 3 failed dependencies
Drill into...
3 Samples

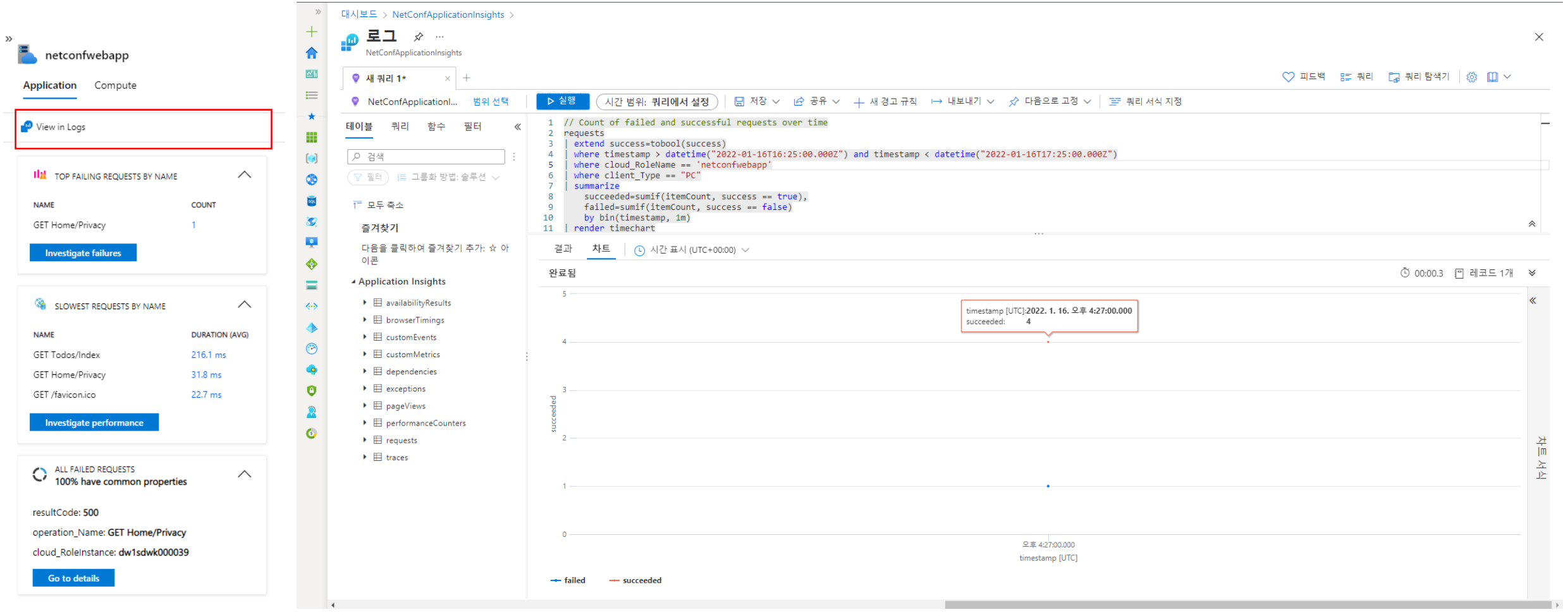
성능조사


netconfwebapp
Application
Compute
View in Logs
TOP FAILING REQUESTS BY NAME
NAME
COUNT
GET Home/Privacy
1
Investigate failures
SLOWEST REQUESTS BY NAME
NAME
DURATION (AVG)
GET Todos/Index
216.1 ms
GET Home/Privacy
31.8 ms
GET /favicon.ico
22.7 ms
Investigate performance
ALL FAILED REQUESTS
100% have common properties
resultCode: 500
operation_Name: GET Home/Privacy
cloud_RoleInstance: dw1sdwk000039
Go to details
대시보드 > NetConfApplicationInsights >
Performance
Refresh
Profiler
View in Logs
Analyze with Workbooks
Copy link
Feedback
Server
Browser
현지 시간: 01.17. 오전 1:19 - 오전 2:19
Roles = All
Operations
Dependencies
Roles
Operation times: zoom into a range
Avg
50TH
95TH
99TH
Request count
Select operation
Search to filter items...
OPERATION NAME
DURATION (AVG)
COUNT
PIN
Overall
60.0 ms
5
GET Todos/Index
216 ms
GET Home/Privacy
31.8 ms
GET /favicon.ico
22.7 ms
GET /css/site.css
18.3 ms
GET /js/site.js
11.3 ms
Overall
Distribution of durations: zoom into a range
Scale
Request count
Duration
Insights (2)
80% COMMON PROPERTIES:
resultCode, client_CountryOrRegion, performanceBucket, cloud_RoleName, cloud_RoleInstance
Top 3 Dependencies
Drill into...
5 Samples

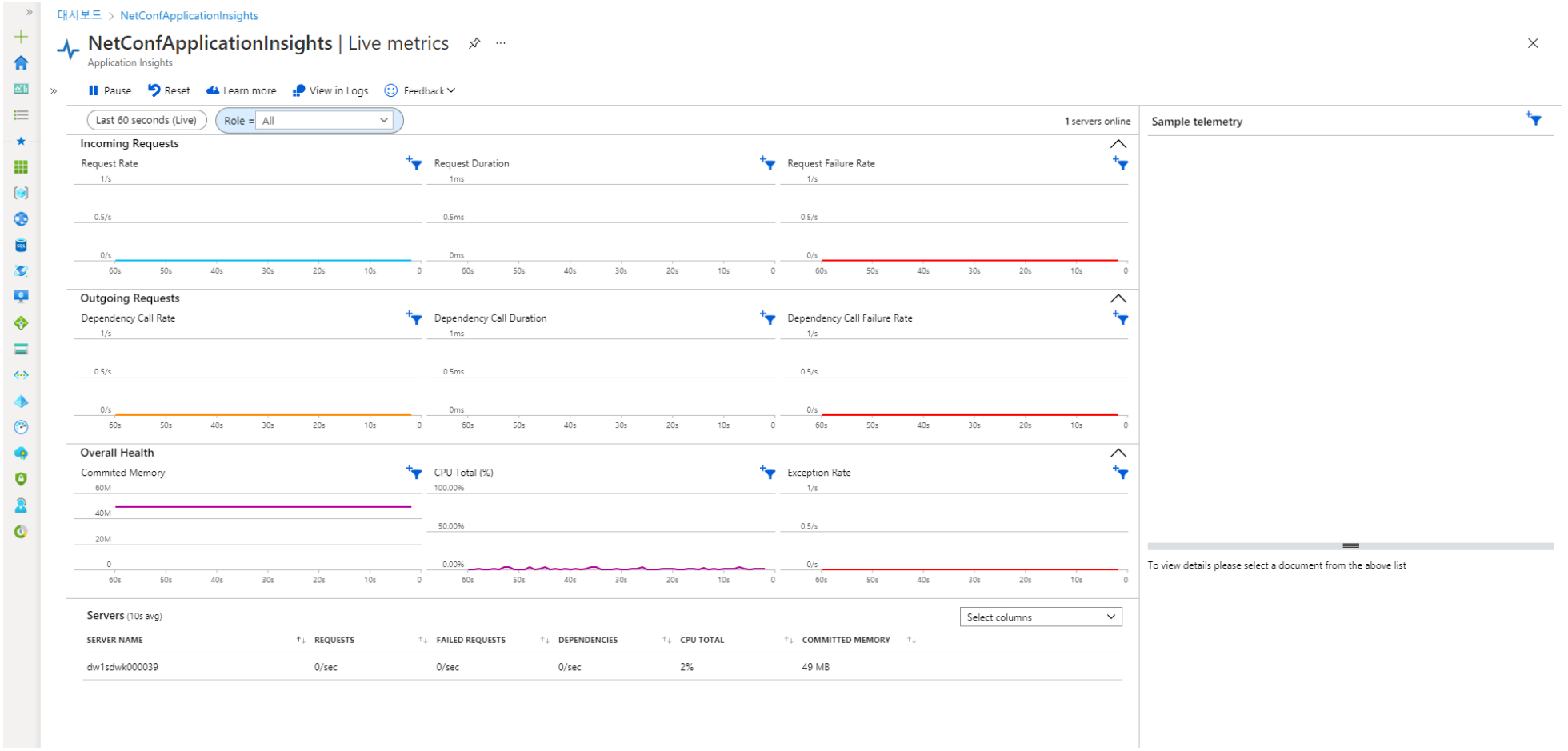
세부 정보로 이동


netconfwebapp
Application
Compute
View in Logs
TOP FAILING REQUESTS BY NAME
NAME
COUNT
GET Home/Privacy
1
Investigate failures
SLOWEST REQUESTS BY NAME
NAME
DURATION (AVG)
GET Todos/Index
216.1 ms
GET Home/Privacy
31.8 ms
GET /favicon.ico
22.7 ms
Investigate performance
ALL FAILED REQUESTS
100% have common properties
resultCode: 500
operation_Name: GET Home/Privacy
cloud_RoleInstance: dw1sdwk000039
Go to details
대시보드 > NetConfApplicationInsights >
End-to-end transaction details
netconfapplicationinsights
Search results
Learn more
Copy link
Feedback
Leave preview
Building complete transaction
Discovering resources...
= Request (incoming)
= Exception
EVENT
RES.
DURATION
0
10 MS
20 MS
30 MS
netconfwebapp GET Home/Privacy
500
31.8 ms
EXCEPTION System.DivideByZeroException
Search results
2 All
0 Traces
0 Events
View all telemetry
Create work item
netconfwebapp
GET Home/Privacy
Request Properties
Show all
Event time
2022. 1. 17. 오전 1:27:18.721 (Local time)
Name
GET Home/Privacy
Response code
500
Successful request
false
Response time
31.8 ms
URL
https://netconfwebapp.azurewebsites.net/Home/Privacy
Custom Properties
AspNetCoreEnvironment
Production
Call Stack
Just my code
Copy
Expand
System.DivideByZeroException:
at lambda_method131 (Anonymously Hosted DynamicMethods Assembly,
at Microsoft.AspNetCore.Mvc.Infrastructure.ActionMethodExecutor+
at Microsoft.AspNetCore.Mvc.Infrastructure.ControllerActionInvok
at System.Runtime.ExceptionServices.ExceptionDispatchInfo.Throw
at System.Runtime.CompilerServices.TaskAwaiter.ThrowForNonSucces
at System.Runtime.CompilerServices.TaskAwaiter.HandleNonSuccessA
at Microsoft.AspNetCore.Mvc.Infrastructure.ControllerActionInvok
at System.Runtime.ExceptionServices.ExceptionDispatchInfo.Throw
at Microsoft.AspNetCore.Mvc.Infrastructure.ControllerActionInvok
at Microsoft.AspNetCore.Mvc.Infrastructure.ControllerActionInvok
at Microsoft.AspNetCore.Mvc.Infrastructure.ControllerActionInvok
at System.Runtime.ExceptionServices.ExceptionDispatchInfo.Throw
at System.Runtime.CompilerServices.TaskAwaiter.ThrowForNonSucces
at System.Runtime.CompilerServices.TaskAwaiter.HandleNonSuccessA
at Microsoft.AspNetCore.Mvc.Infrastructure.ResourceInvoker+<<Inv

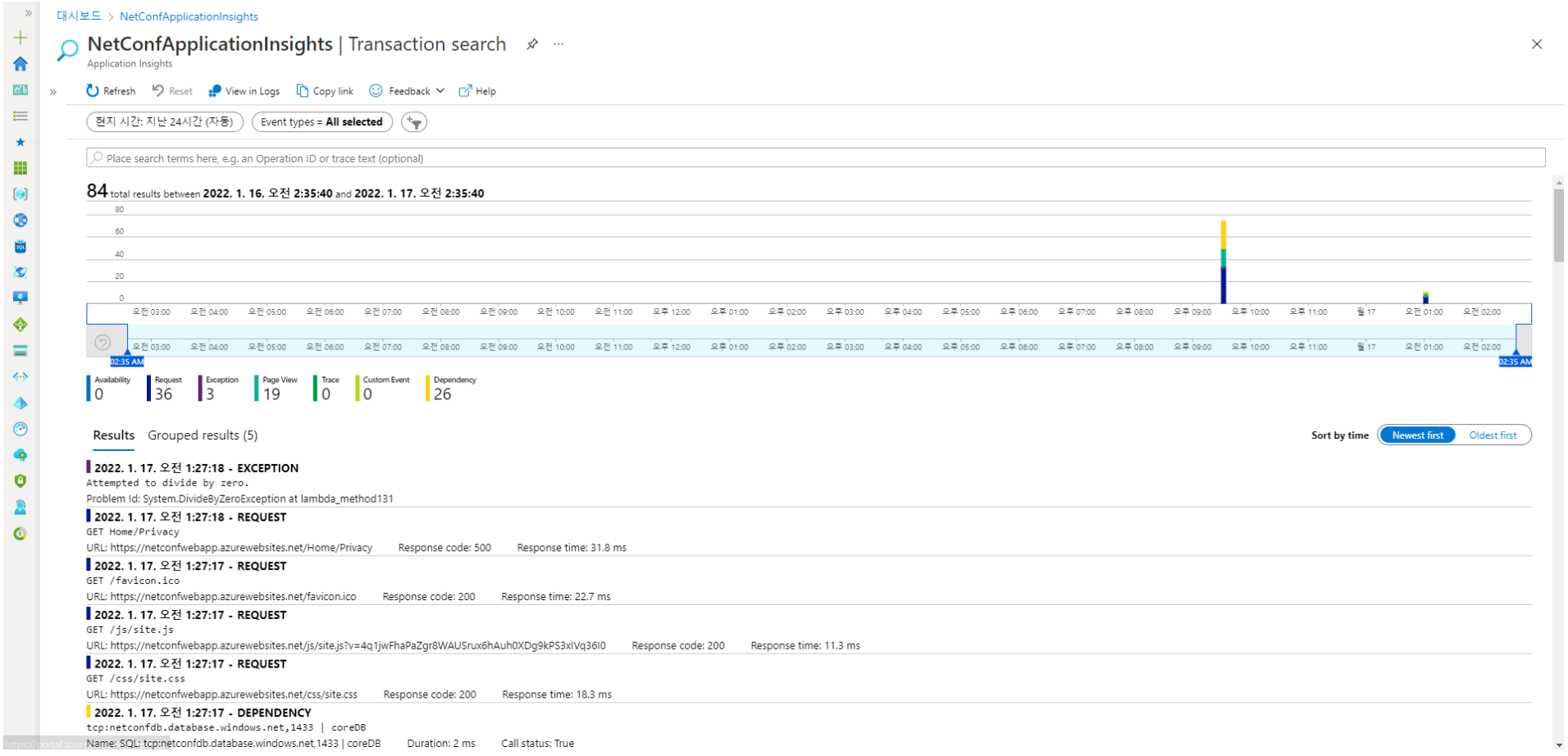
로그 보기


netconfwebapp
Application
Compute
View in Logs
TOP FAILING REQUESTS BY NAME
NAME
COUNT
GET Home/Privacy
1
Investigate failures
SLOWEST REQUESTS BY NAME
NAME
DURATION (AVG)
GET Todos/Index
216.1 ms
GET Home/Privacy
31.8 ms
GET /favicon.ico
22.7 ms
Investigate performance
ALL FAILED REQUESTS
100% have common properties
resultCode: 500
operation_Name: GET Home/Privacy
cloud_RoleInstance: dw1sdwk000039
Go to details
대시보드 > NetConfApplicationInsights >
로그
NetConfApplicationInsights
새 쿼리 1*
피드백
쿼리
쿼리 탐색기
NetConfApplicationI...
범위 선택
실행
시간 범위: 쿼리에서 설정
저장
공유
새 경고 규칙
내보내기
다음으로 고정
쿼리 서식 지정
테이블
쿼리
함수
필터
검색
모두 축소
즐겨찾기
다음을 클릭하여 즐겨찾기 추가: ☆ 아이콘
Application Insights
availabilityResults
browserTimings
customEvents
customMetrics
dependencies
exceptions
pageViews
performanceCounters
requests
traces
1 // Count of failed and successful requests over time
2 requests
3 | extend success=tobool(success)
4 | where timestamp > datetime("2022-01-16T16:25:00.000Z") and timestamp < datetime("2022-01-16T17:25:00.000Z")
5 | where cloud_RoleName == 'netconfwebapp'
6 | where client_Type == "PC"
7 | summarize
8 succeeded=sumif(itemCount, success == true),
9 failed=sumif(itemCount, success == false)
10 by bin(timestamp, 1m)
11 | render timechart
결과
차트
시간 표시 (UTC+00:00)
완료됨
00:00.3
레코드 1개
timestamp [UTC]:2022. 1. 16. 오후 4:27:00.000
succeeded: 4
succeeded
timestamp [UTC]
오후 4:27:00.000
failed
succeeded
차트 서식

라이브 메트릭


대시보드 > NetConfApplicationInsights
NetConfApplicationInsights | Live metrics
Application Insights
Pause
Reset
Learn more
View in Logs
Feedback
Last 60 seconds (Live)
Role = All
1 servers online
Sample telemetry
Incoming Requests
Request Rate
Request Duration
Request Failure Rate
Outgoing Requests
Dependency Call Rate
Dependency Call Duration
Dependency Call Failure Rate
Overall Health
Commited Memory
CPU Total (%)
Exception Rate
To view details please select a document from the above list
Servers (10s avg)
Select columns
SERVER NAME
REQUESTS
FAILED REQUESTS
DEPENDENCIES
CPU TOTAL
COMMITTED MEMORY
dw1sdwk000039
0/sec
0/sec
0/sec
2%
49 MB

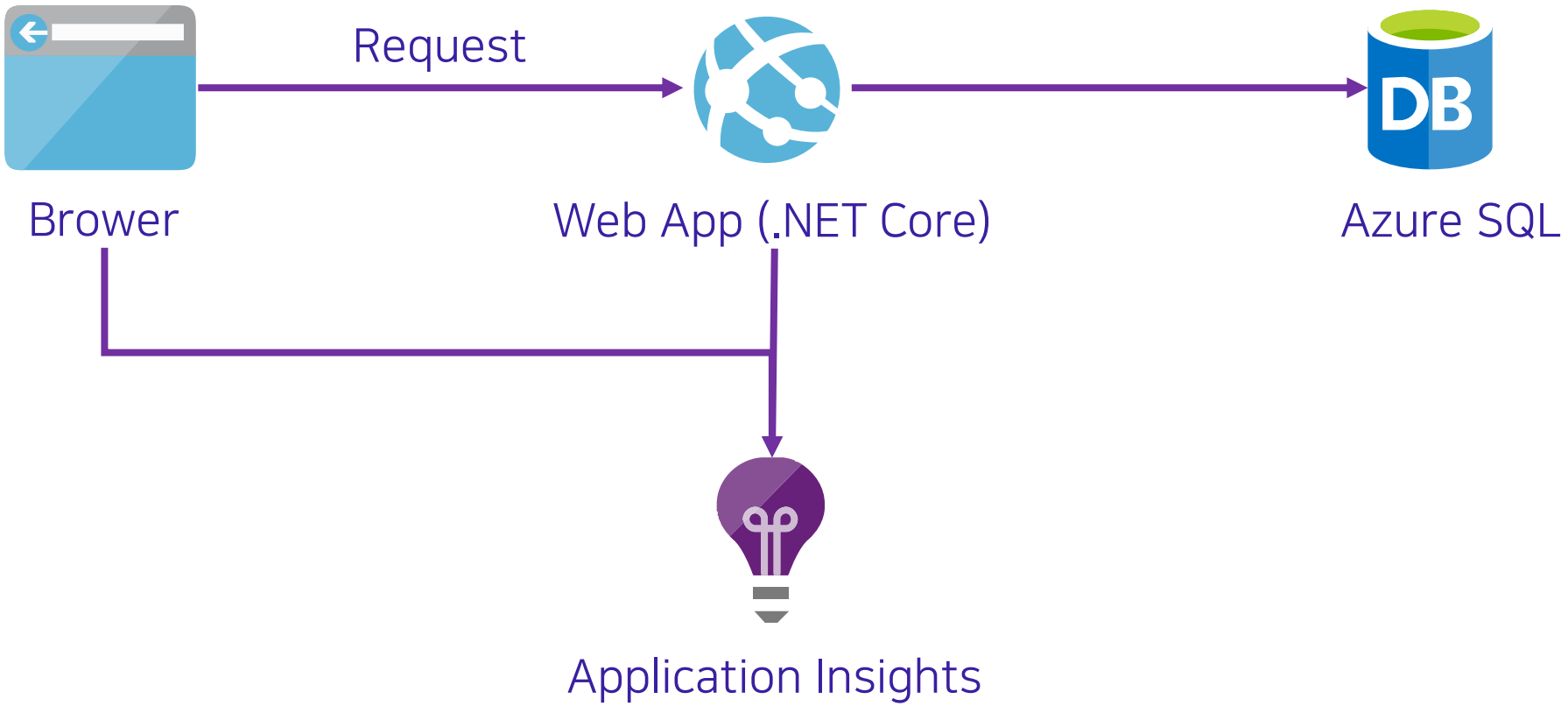
트랜잭션 검사


대시보드 > NetConfApplicationInsights
NetConfApplicationInsights | Transaction search
Application Insights
Refresh
Reset
View in Logs
Copy link
Feedback
Help
현지 시간: 지난 24시간 (자동)
Event types = All selected
Place search terms here, e.g. an Operation ID or trace text (optional)
84 total results between 2022. 1. 16. 오전 2:35:40 and 2022. 1. 17. 오전 2:35:40
Availability 0
Request 36
Exception 3
Page View 19
Trace 0
Custom Event 0
Dependency 26
Results
Grouped results (5)
Sort by time
Newest first
Oldest first
2022. 1. 17. 오전 1:27:18 - EXCEPTION
Attempted to divide by zero.
Problem Id: System.DivideByZeroException at lambda_method131
2022. 1. 17. 오전 1:27:18 - REQUEST
GET Home/Privacy
URL: https://netconfwebapp.azurewebsites.net/Home/Privacy Response code: 500 Response time: 31.8 ms
2022. 1. 17. 오전 1:27:17 - REQUEST
GET /favicon.ico
URL: https://netconfwebapp.azurewebsites.net/favicon.ico Response code: 200 Response time: 22.7 ms
2022. 1. 17. 오전 1:27:17 - REQUEST
GET /js/site.js
URL: https://netconfwebapp.azurewebsites.net/js/site.js?v=4q1jwFhaPaZgr8WAUSrux6hAuh0XDg9kPS3xIVq36I0 Response code: 200 Response time: 11.3 ms
2022. 1. 17. 오전 1:27:17 - REQUEST
GET /css/site.css
URL: https://netconfwebapp.azurewebsites.net/css/site.css Response code: 200 Response time: 18.3 ms
2022. 1. 17. 오전 1:27:17 - DEPENDENCY
tcp:netconfdb.database.windows.net,1433 | coreDB
Name: SQL: tcp:netconfdb.database.windows.net,1433 | coreDB Duration: 2 ms Call status: True

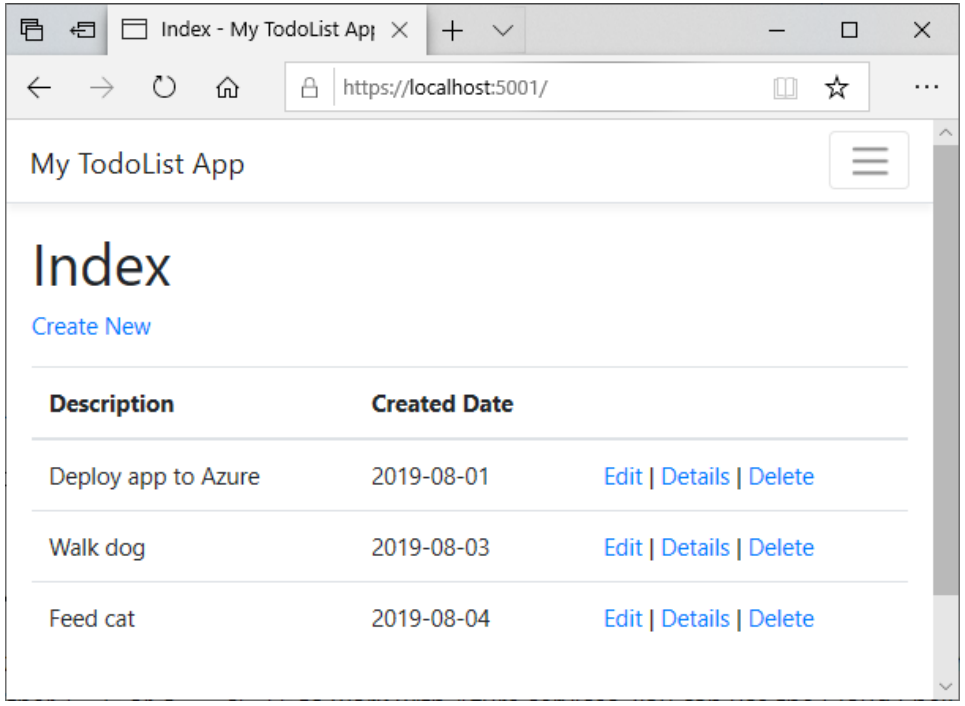
데모

.NET Core application 에서 Application Insights 적용하기

데모 시나리오


Request
DB
Brower
Web App (.NET Core)
Azure SQL
Application Insights

WebApp



https://docs.microsoft.com/ko-kr/azure/app-service/tutorial-dotnetcore-sqldb-app?pivots=platform-windows

샘플 애플리케이션 복제

```
$ git clone https://github.com/azure-samples/dotnetcore-sqldb-tutorial

$ cd dotnetcore-sqldb-tutorial

$ dotnet tool install -g dotnet-ef
$ dotnet ef database update
$ dotnet run
```

리소스 그룹 생성

```
$ az group create --name NetConfResourceGroup --location
koreacentral
```

SQL Database 논리 서버 만들기

```
$ az sql server create --name netconfdb --resource-group
NetConfResourceGroup --location koreacentral --admin-user
sqladmin --admin-password Pa$$word
```

데이터베이스 만들기

```
$ az sql db create --resource-group NetConfResourceGroup --server netconfdb --name coreDB --service-objective S0
```

연결 문자열 검색

```
$ az sql db show-connection-string --client ado.net --
server netconfdb --name coreDB
```

프로덕션 데이터베이스에 연결하도록 앱 구성

appsettings.json > {} ApplicationInsights > InstrumentationKey

```
  },
  "AllowedHosts": "*",
  "ConnectionStrings": {
    "MyDbConnection": "Server=tcp:netconfdb.database.windows.net,1433;Database=coreDB;User ID=sqladmin;Passwo
  },
```

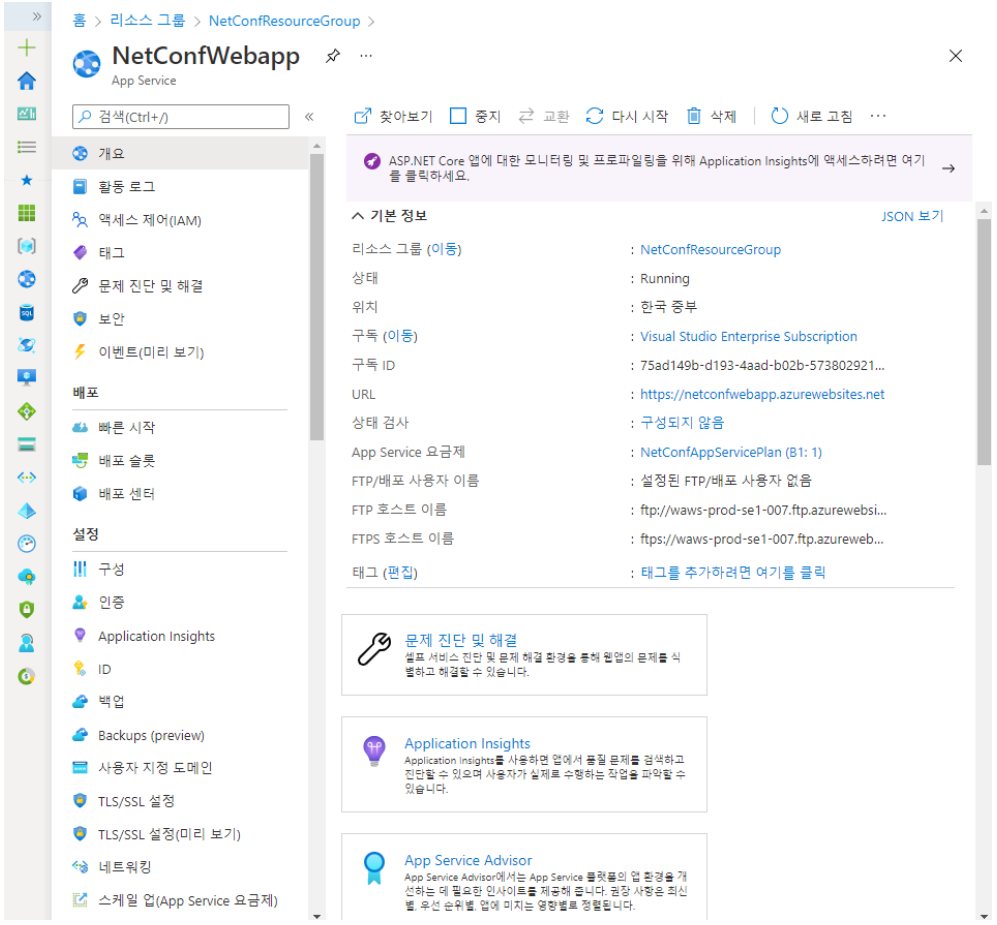
Startup.cs > {} DotNetCoreSqlDb > DotNetCoreSqlDb.Startup > ConfigureServices(IServiceCollection services)

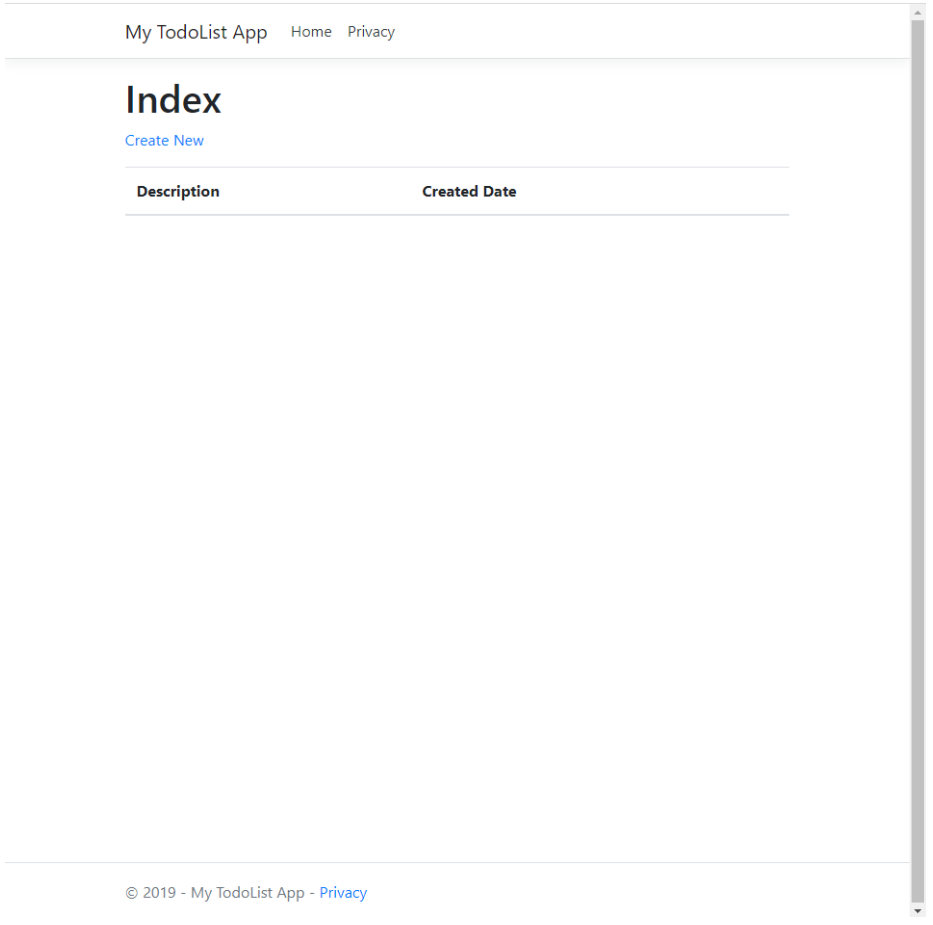
```
0 references
public void ConfigureServices(IServiceCollection services)
{
    services.AddControllersWithViews();
    services.AddDbContext<MyDatabaseContext>(options =>
        options.UseSqlServer(Configuration.GetConnectionString("MyDbConnection")));
}
```

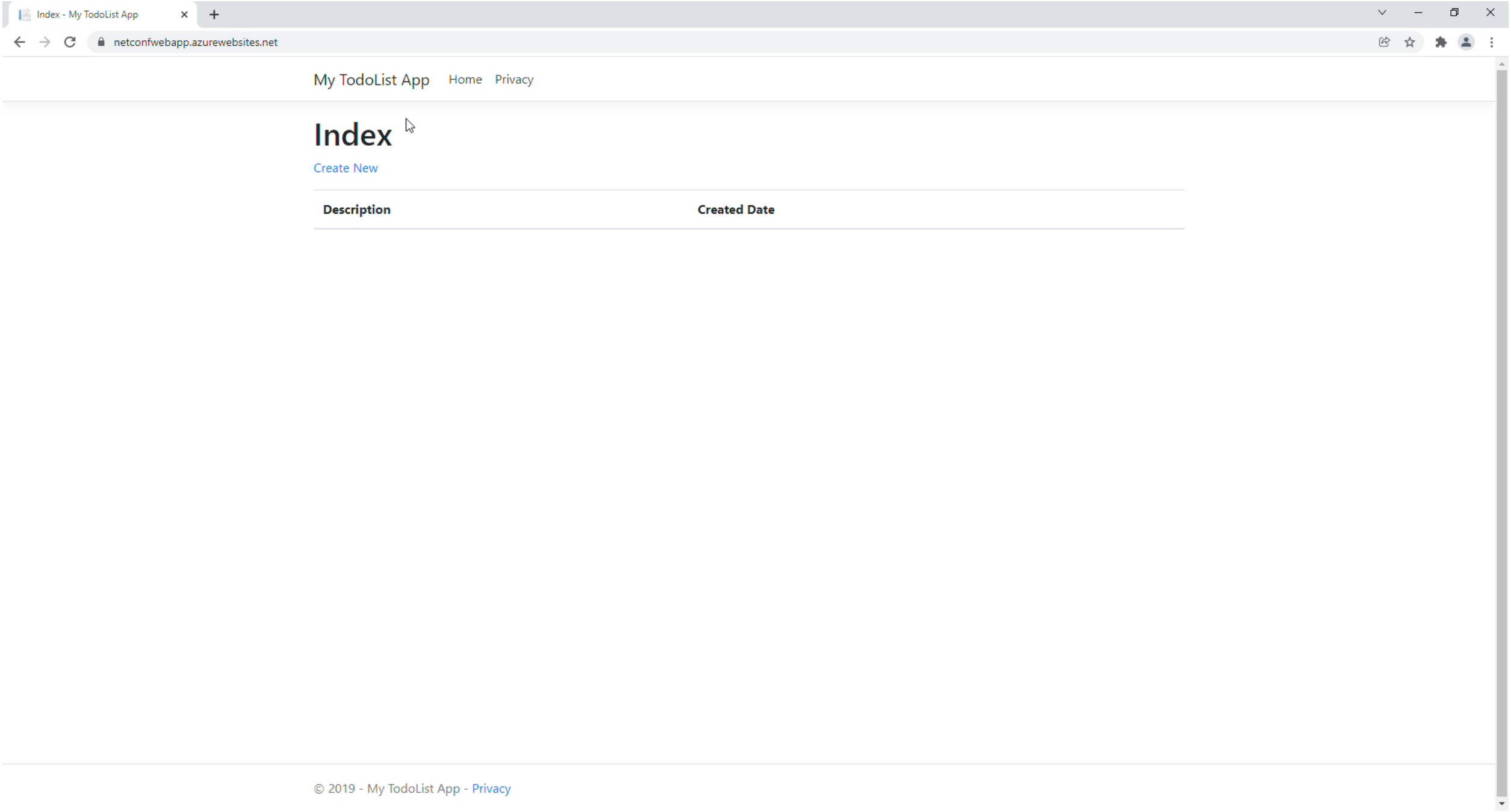
프로덕션 데이터베이스로 데이터베이스 마이그레이션 실행

```
# Delete old migrations
$ rm -r Migrations


# Recreate migrations with UseSqlServer (see previous snippet)
$ dotnet ef migrations add InitialCreate


# Run migrations
$ dotnet ef database update
```

Application 배포

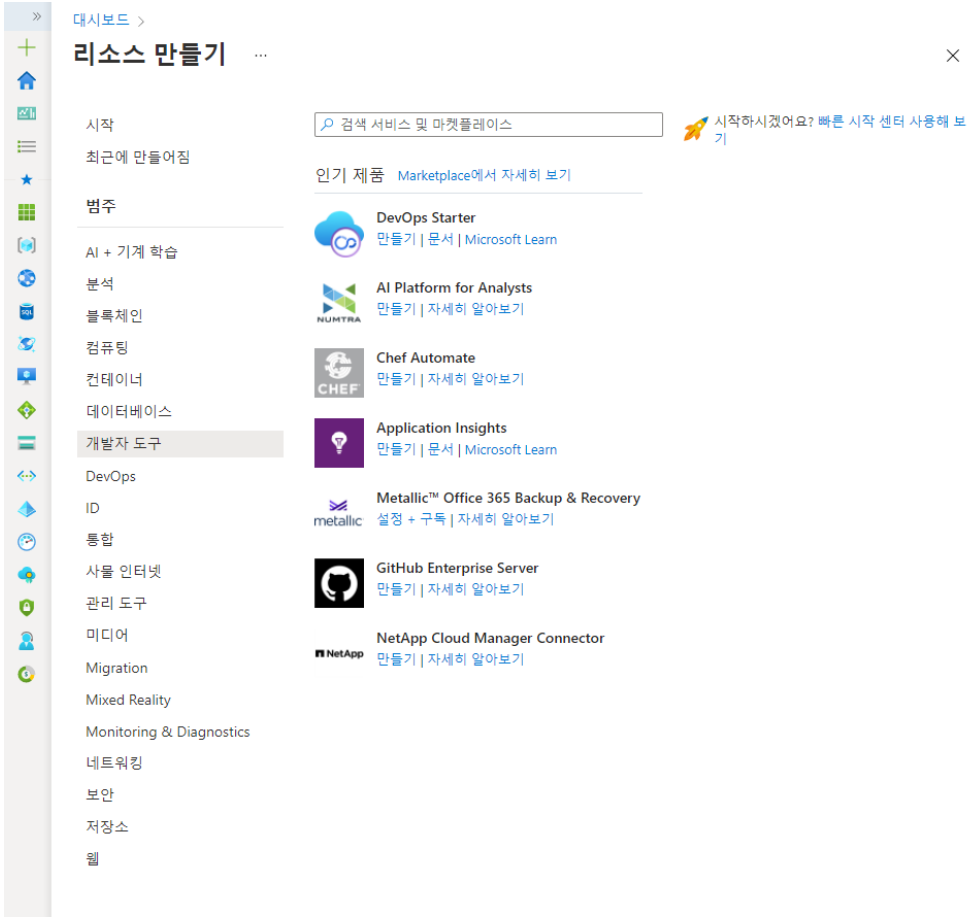


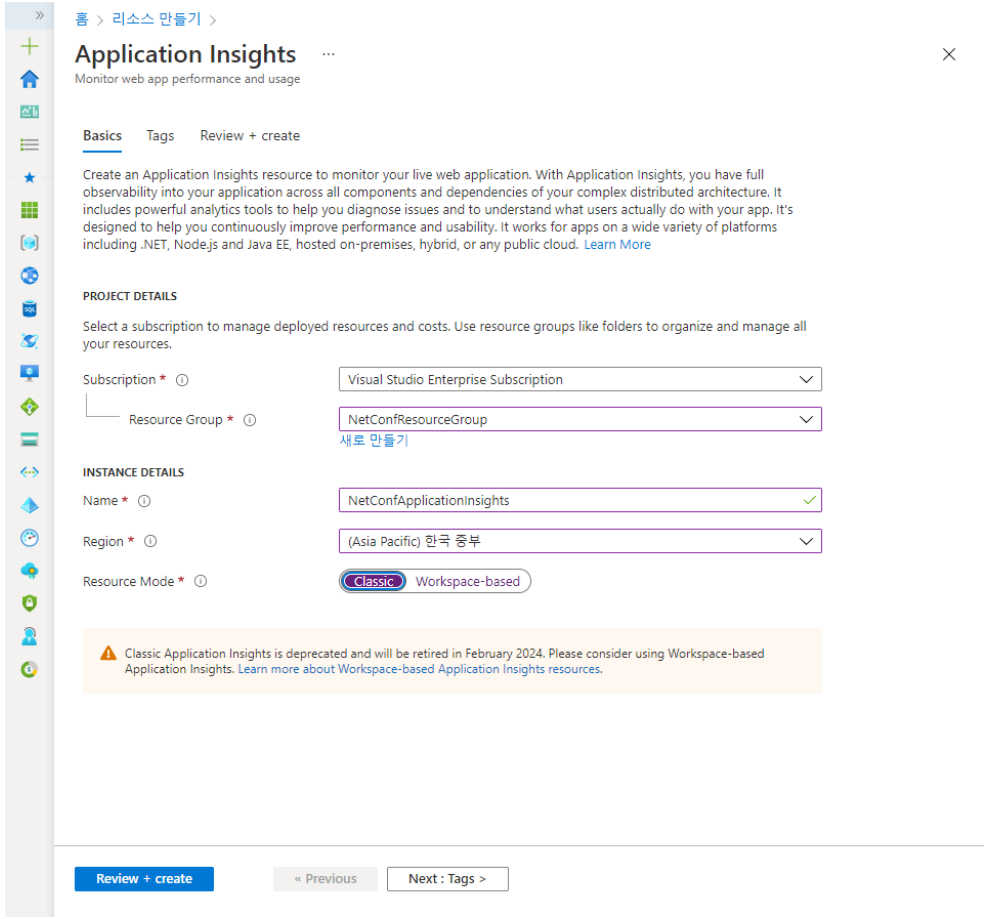



Index - My TodoList App
netconfwebapp.azurewebsites.net
My TodoList App
Home
Privacy
Index
Create New
Description
Created Date
© 2019 - My TodoList App - Privacy

Application Insights

Application Insights 생성





서버 원격 분석

1. ApplicatioInsights.AspNetCore package 설치

```
$ dotnet add package Microsoft.ApplicationInsights.AspNetCore
```

DotNetCoreSqlDb.csproj

```
<Project Sdk="Microsoft.NET.Sdk.Web">

  <PropertyGroup>
    <TargetFramework>net5.0</TargetFramework>
  </PropertyGroup>


  <ItemGroup>
    <PackageReference Include="Microsoft.ApplicationInsights.AspNetCore" Version="2.20.0" />
    <PackageReference Include="Microsoft.EntityFrameworkCore.Sqlite" Version="5.0.10" />
    <PackageReference Include="Microsoft.EntityFrameworkCore.SqlServer" Version="5.0.10" />
    <PackageReference Include="Microsoft.EntityFrameworkCore.Tools" Version="5.0.10">
      <PrivateAssets>all</PrivateAssets>
      <IncludeAssets>runtime; build; native; contentfiles; analyzers; buildtransitive</Include
    </PackageReference>
    <PackageReference Include="Microsoft.Extensions.Logging.AzureAppServices" Version="5.0.10"
  </ItemGroup>

</Project>

```

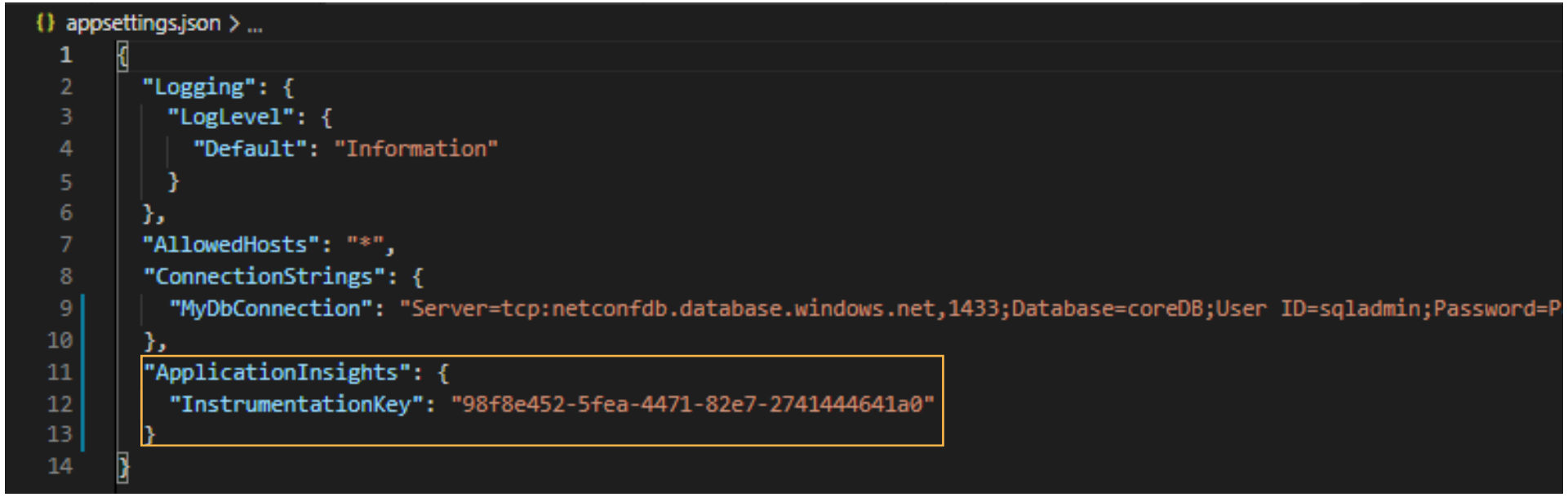
2. ConfigureServices() 수정

Services.AddApplicationInsightsTelemetry();를 Startup 클래스의 ConfigureServices() 메서드에 추가합니다.

```
public void ConfigureServices(IServiceCollection services)
{
    services.AddControllersWithViews();
    services.AddDbContext<MyDatabaseContext>(options =>
            options.UseSqlServer(Configuration.GetConnectionString("MyDbConnection")));

    // The following line enables Application Insights telemetry collection.
    services.AddApplicationInsightsTelemetry();
}
```

3. InstrumentationKey 추가

application.json에 InstrumentationKey를 추가합니다.



4. Demo 코드 수정

Controllers > HomeController.cs > ...

```
9   namespace DotNetCoreSqlDb.Controllers
10  {
        0 references
11      public class HomeController : Controller
12      {
            0 references
13          public IActionResult Index()
14          {
15              return View();
16          }
17
            0 references
18          public IActionResult Privacy()
19          {
20              int number1 = 3000;
21              int number2 = 0;
22              int number3 = (number1 / number2);
23
24              return View();
25          }
26
```

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portal.azure.com/#@yeongseonchoegmail.onmicrosoft.com/resource/subscriptions/75ad149b-d193-4aad-b02b-573802921f9e/resourcegroups/NetConfResourceGroup/providers/microsoft.insights/components/NetConfApplicationInsights/applicationMap

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Last hour

Update map components

Exclude 4xx: On Off | Layout:

- Overview
- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems

Investigate

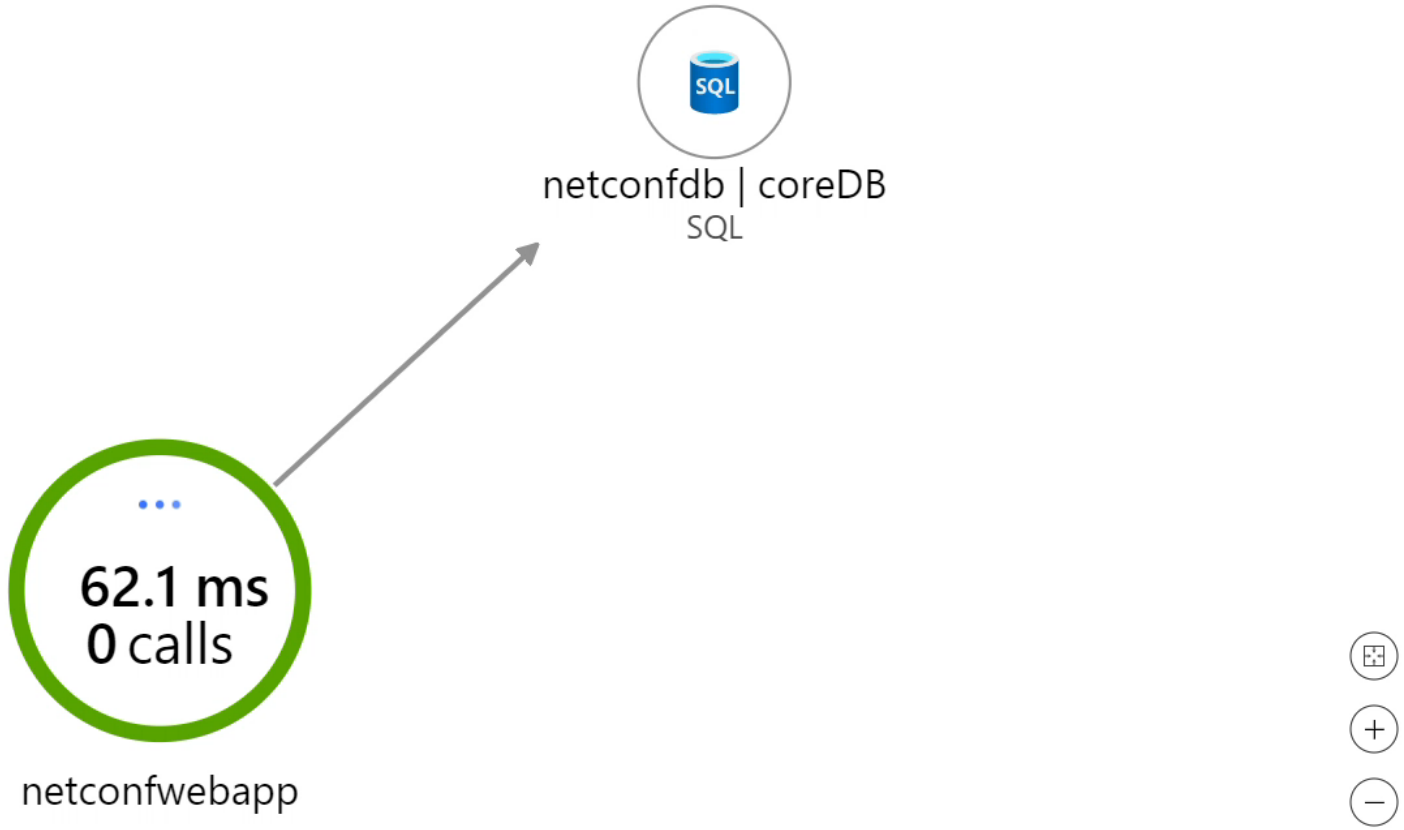
- Application map
- Smart detection
- Live metrics
- Transaction search
- Availability
- Failures
- Performance
- Troubleshooting guides (preview)

Monitoring

- Alerts
- Metrics
- Logs
- Workbooks

Usage

- Users
- Sessions
- Events



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- Events

Application Dashboard | Getting started | Search | Logs | Monitor resource group | Feedback | Favorites | Rename | Delete

Migrate to alerts-based smart detections (preview) to get your detections as alerts and enjoy all the alerts features. →

Essentials JSON View

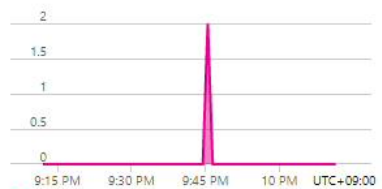
Resource group (Move) : NetConfResourceGroup
Location : Korea Central
Subscription (Move) : Visual Studio Enterprise Subscription
Subscription ID : 75ad149b-d193-4aad-b02b-573802921f9e
Tags (Edit) : Click here to add tags

Instrumentation Key : 3abf7a51-8036-4c3b-9a32-93cd201747df
Connection String : InstrumentationKey=3abf7a51-8036-4c3b-9a32-93cd201747df;IngestionEndpoint=https://koreacentral...

Classic Application Insights is deprecated and will be retired in February 2024.
Migrate this resource to Workspace-based Application Insights to gain support for all of the capabilities of Log Analytics, including Customer-Managed Keys and Commitment Tiers. Click here to learn more and migrate in a few clicks. →

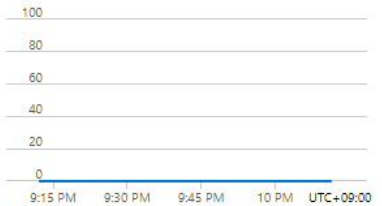
Show data for last: 30 minutes | 1 hour | 6 hours | 12 hours | 1 day | 3 days | 7 days | 30 days

Failed requests

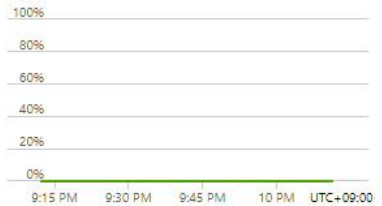


Server response time

Server requests



Availability



클라이언트 원격 분석

1. _ViewImports.cshtml에서 다음 injection을 추가

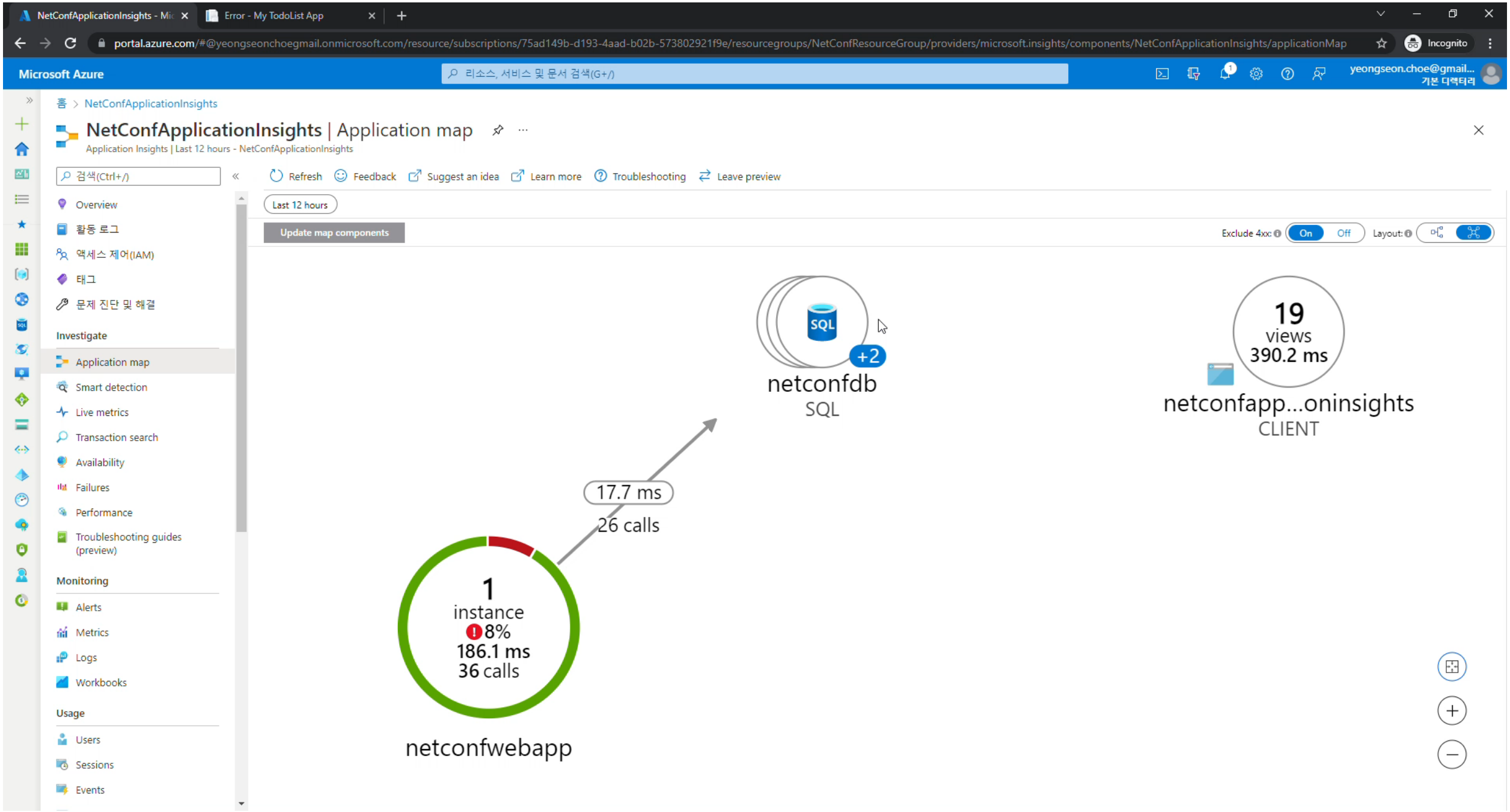
Views > _ViewImports.cshtml

```
1   @using DotNetCoreSqlDb
2   @using DotNetCoreSqlDb.Models
3   @addTagHelper *, Microsoft.AspNetCore.Mvc.TagHelpers
4   @inject Microsoft.ApplicationInsights.AspNetCore.JavaScriptSnippet JavaScriptSnippet
```

2. HtmlHelper를 <head> 섹션 끝에 추가

Views > Shared > _Layout.cshtml

```
1   <!DOCTYPE html>
2   <html>
3   <head>
4       <meta charset="utf-8" />
5       <meta name="viewport" content="width=device-width, initial-scale=1.0" />
6       <title>@ViewData["Title"] - My TodoList App</title>
7
8       <environment include="Development">
9           <link rel="stylesheet" href="~/lib/bootstrap/dist/css/bootstrap.css" />
10      </environment>
11      <environment exclude="Development">
12          <link rel="stylesheet" href="https://stackpath.bootstrapcdn.com/bootstrap/4.3.1/css/bootstrap.min.css"
13                asp-fallback-href="~/lib/bootstrap/dist/css/bootstrap.min.css"
14                asp-fallback-test-class="sr-only" asp-fallback-test-property="position" asp-fallback-test-value="abs
15                crossorigin="anonymous"
16                integrity="sha384-ggOyR0iXCbMQv3Xipma34MD+dH/1fQ784/j6cY/iJTQUOhcWr7x9JvoRxT2MZw1T" />
17      </environment>
18      <link rel="stylesheet" href="~/css/site.css" />
19      @Html.Raw(JavaScriptSnippet.FullScript)
20  </head>
```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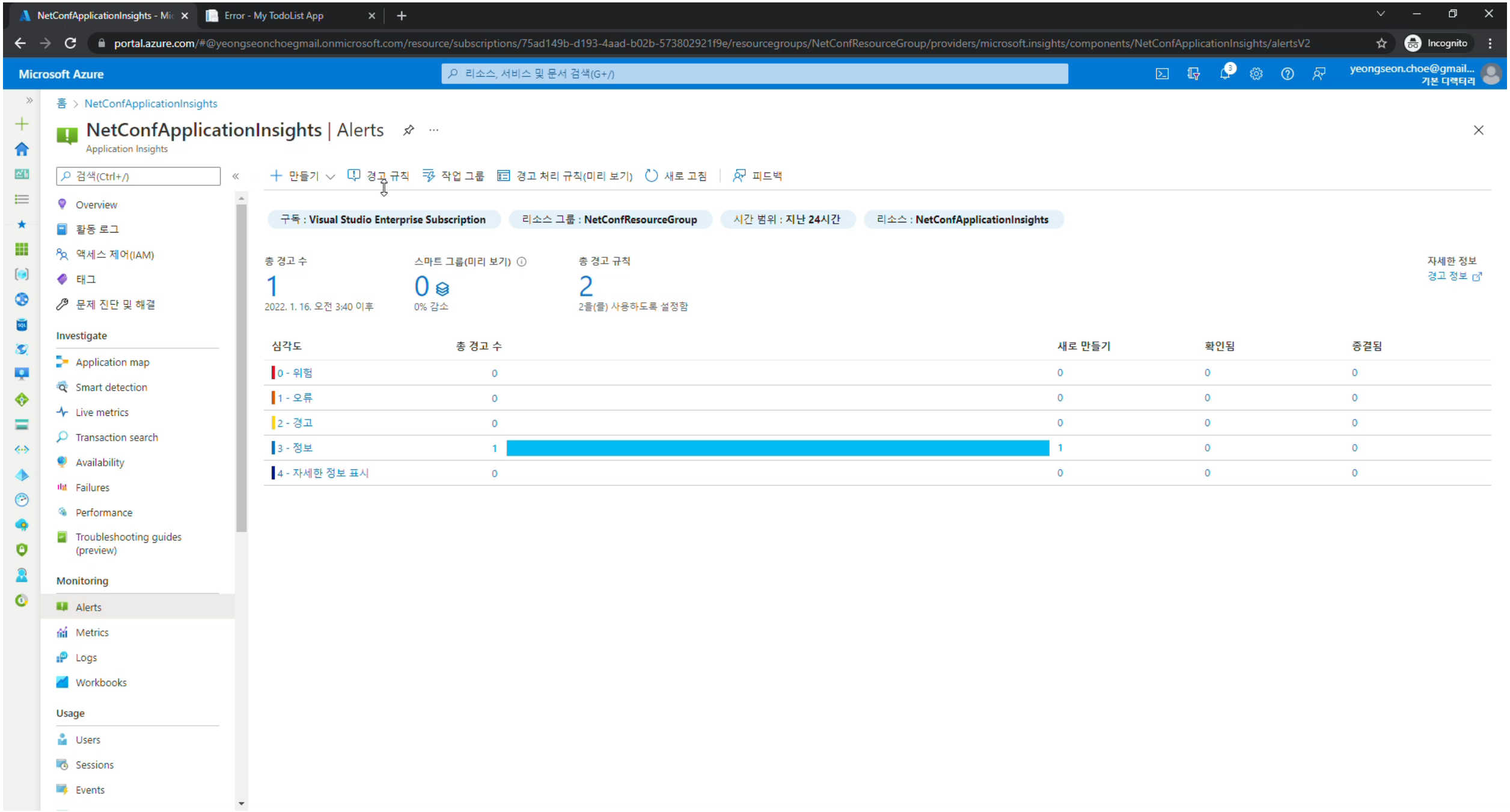
Update map components
Exclude 4xx:
On
Off
Layout:
SQL
+2
netconfdb
SQL
19
views
390.2 ms
netconfapp...oninsights
CLIENT
17.7 ms
26 calls
1
instance
8%
186.1 ms
36 calls
netconfwebapp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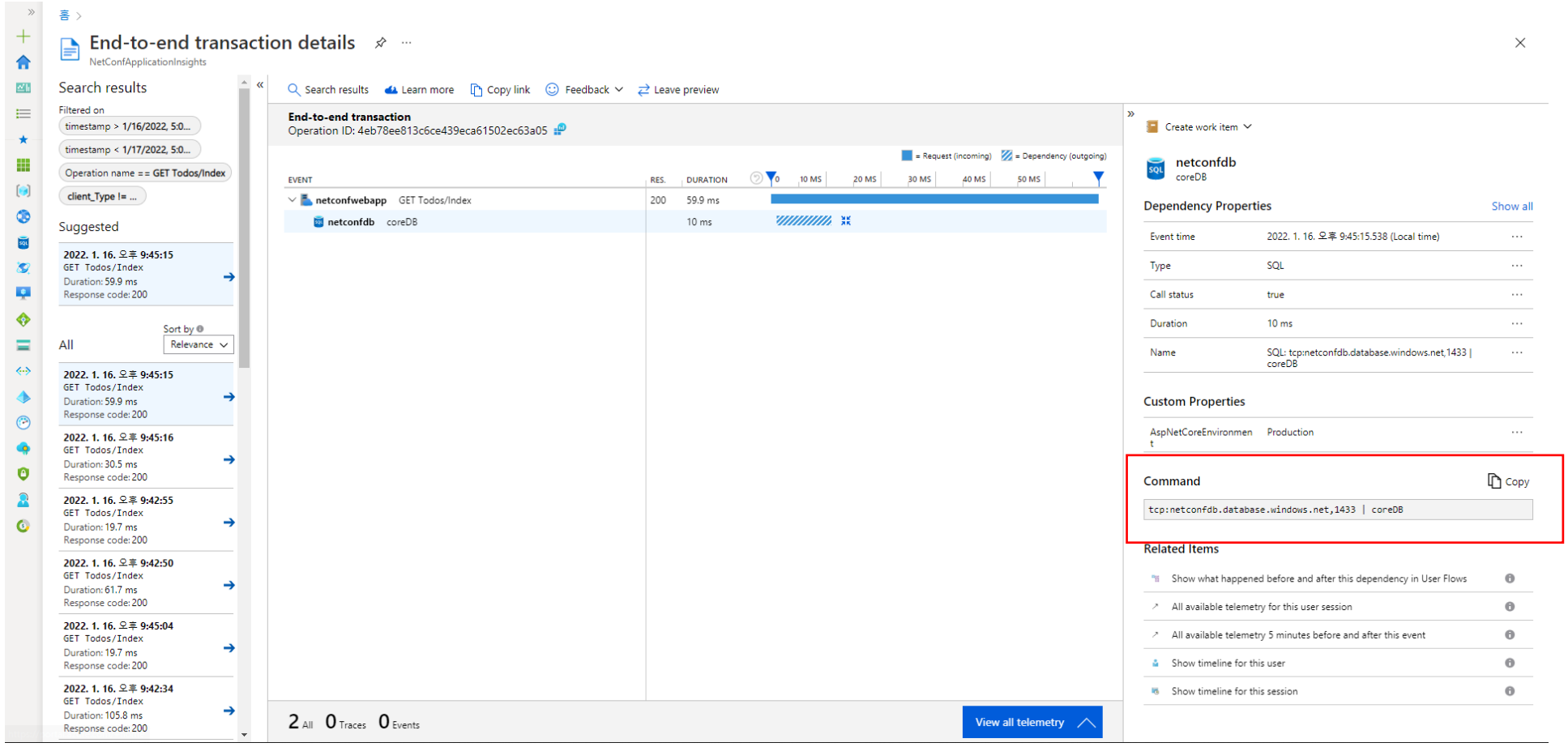
만들기
경고 규칙
작업 그룹
경고 처리 규칙(미리 보기)
새로 고침
피드백
구독 : Visual Studio Enterprise Subscription
리소스 그룹 : NetConfResourceGroup
시간 범위 : 지난 24시간
리소스 : NetConfApplicationInsights
총 경고 수
1
2022. 1. 16. 오전 3:40 이후
스마트 그룹(미리 보기)
0
0% 감소
총 경고 규칙
2
2을(를) 사용하도록 설정함
자세한 정보
경고 정보
심각도
총 경고 수
새로 만들기
확인됨
종결됨
0 - 위험 0 0 0 0
1 - 오류 0 0 0 0
2 - 경고 0 0 0 0
3 - 정보 1 1 0 0
4 - 자세한 정보 표시 0 0 0 0

TelemtryModule 기능 확장

기본 Telemetry Module

- RequestTrackingTelemetryModule
- DependencyTrackingTelemetryModule
- PerformanceCollectorModule
- QuickPulseTelemetryModule
- AppServicesHeartbeatTelemetryModule
- AzureInstanceMetadataTelemetryModule
- EventCounterCollectionModule

DependencyTracking 를 이용한 SQL 추적 적용 전



SQL Text collection 추가

Startup.cs

Startup.cs > {} DotNetCoreSqlDb > DotNetCoreSqlDb.Startup > ConfigureServices(IServiceCollection services)

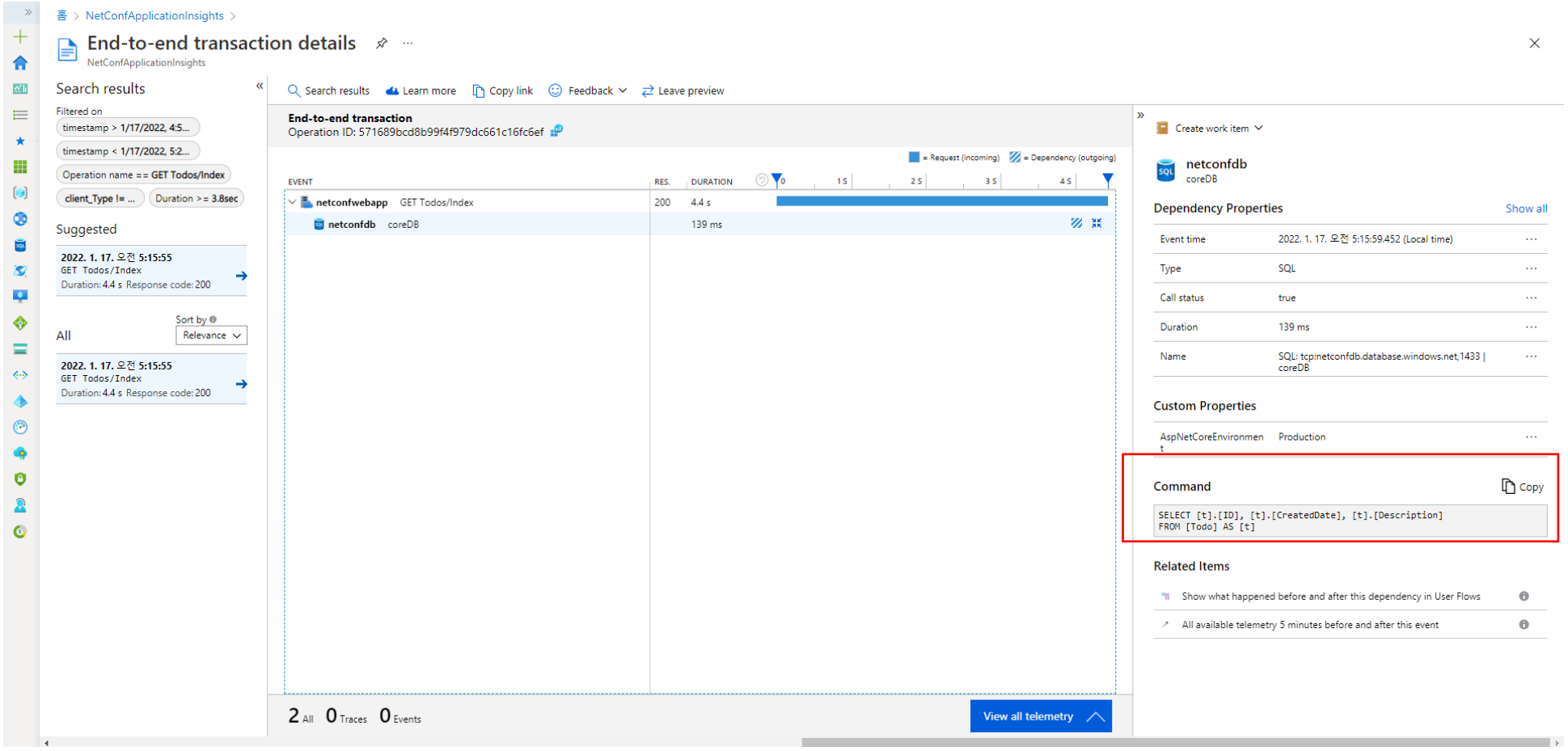
```
35          // The following line enables Application Insights telemetry collection.
36          services.AddApplicationInsightsTelemetry();
37
38          // to opt-in to SQL Text collection
39          services.ConfigureTelemetryModule<DependencyTrackingTelemetryModule>((module, o) => { module. EnableSqlCommandTextInstrumentation = true; });
```

```
$ dotnet add package Microsoft.Data.SqlClient
```

DotNetCoreSqlDb.csproj

```
8     <ItemGroup>
9       <PackageReference Include="Microsoft.ApplicationInsights.AspNetCore" Version="2.20.0" />
10      <PackageReference Include="Microsoft.Data.SqlClient" Version="4.0.0" />
11      <PackageReference Include="Microsoft.EntityFrameworkCore.Sqlite" Version="5.0.10" />
12      <PackageReference Include="Microsoft.EntityFrameworkCore.SqlServer" Version="5.0.10" />
```

DependencyTracking 를 이용한 SQL 추적 적용 후



요약

Azure Application Insights는 확장성 있는 APM 서비스
여러 플랫폼에서 손쉽게 사용 가능한 서비스
실시간 웹 애플리케이션을 모니터링
애플리케이션에서 문제 발생시 쉽게 진단 및 분석

참고자료

https://docs.microsoft.com/ko-kr/azure/azure-monitor/app/app-insights-overview

https://docs.microsoft.com/ko-kr/azure/app-service/tutorial-dotnetcore-sqldb-app?pivots=platform-windows

https://docs.microsoft.com/ko-kr/azure/azure-monitor/app/asp-net-core

https://docs.microsoft.com/ko-kr/azure/azure-monitor/app/asp-net-dependencies

고맙습니다!