WEBINAR

Rozwiązania Idera już w Polsce!

Kompleksowa obsługa, efektywność i bezpieczeństwo multiplatformowych środowisk bazodanowych.

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27 października, godz. 12.00

QDP Idera, Inc.

Zaczynamy punktualnie o 12:00

WEBINAR

Rozwiązania IDERA już w Polsce!
Kompleksowa obsługa, efektywność i bezpieczeństwo multiplatformowych środowisk bazodanowych.

Prowadzący:

Mira Zwarycz, Business Development Manager, QDP
Maciej Kawula, Senior Product Manager, QDP

QDP Idera, Inc.

QDP Sp. z o.o.

QDP Sp. z o.o. (wcześniej Quest-Dystrybucja) to dostawca i integrator rozwiązań przeznaczonych do optymalizacji zarządzania systemów IT oraz utrzymania cyberbezpieczeństwa obecny na polskim rynku od 2004 r.

Przedstawiciel wiodących producentów oprogramowania w nast. obszarach:

- **Rozwój i Operacje IT:** ApiOmat/Easy Software, Broadcom, Idera Inc.
- **Cyberbezpieczeństwo**: CybeReady, Cymulate, Micro Focus, InfoBay Secret Double Octopus, Semperis, Sasa Software
- **Zarządzanie dostępem:** IPG Group, Yubico
- **Środowiska hybrydowe:** IPG Group

oraz dostawca usług dotyczących produktów Quest Software/One Identity.

QDP Sp. z o.o.

Oferujemy rozwiązania informatyczne oraz wsparcie technologiczne i usługi integratorskie w zakresie:

- cyberbezpieczeństwa informatycznego
- zarządzania bazami danych i infrastrukturą Microsoft
- monitorowania systemów
- zarządzania tożsamością i dostępem
- automatyzacji procesów
- bezpiecznej komunikacji

Dzięki bezpośredniej współpracy z producentami spółka zapewnia **Usługi** Profesjonalne w zakresie wdrożenia i użytkowania oferowanego oprogramowania.

Agenda

- Grupa Idera Inc.
- Umowa partnerska pomiędzy QDP a Idera Inc.
- Nowe portfolio produktowe w naszej ofercie
- Wybrane rozwiązania nieco bliżej:
  - Aqua Data Studio
  - SQL Diagnostic Manager
  - Precise for Databases
- Podsumowanie

QDP nawiązała współpracę partnerską z Grupą IDERA

QDP

&

Idera, Inc.

Grupa Idera

Idera, Inc.

Grupa Idera www.ideracorp.com działa od ponad 20 lat, a jej klientami na całym świecie są m.in. największe instytucje finansowe, organizacje rządowe, firmy technologiczne oraz sektor produkcji i handlu.

Portfolio produktowe Idera Inc. obejmuje ponad 30 marek i rozwiązań różnych dostawców, podzielonych na trzy główne grupy:

- Data Tools,
- Developer Tools
- DevOps Tools.

Rozwiązania te wykorzystywane są przez miliony użytkowników do projektowania, monitorowania i zarządzania systemami danych oraz do tworzenia i testowania aplikacji.

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Nawiązanie współpracy

QDP Sp. z o.o. podpisała umowę o współpracy partnerskiej z firmami wchodzącymi w skład Grupy Idera - dostawcy kompleksowych rozwiązań bazodanowych i programistycznych.

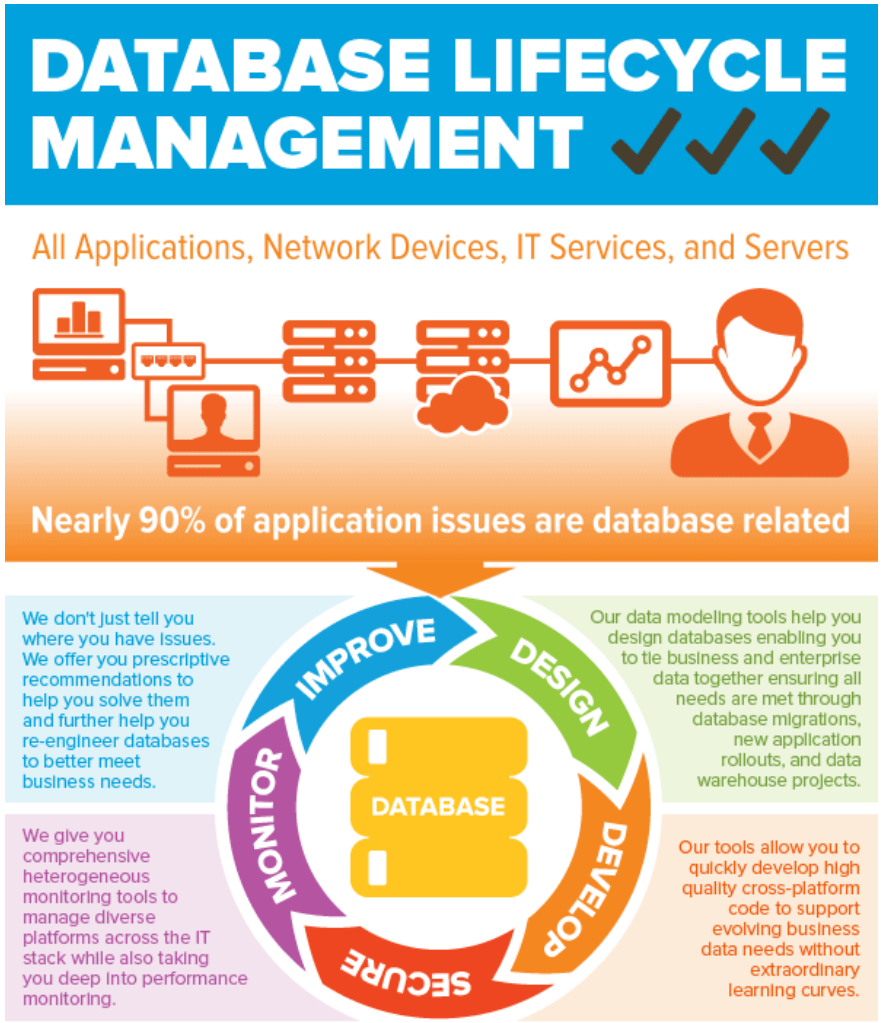
W wyniku nawiązanej współpracy od października br. oferta produktowa QDP poszerzy się o nowe rozwiązania:

- Idera,
- Precise,
- Aquafold,
- Embarcadero.

W ramach współpracy firma QDP zapewnia:

- wsparcie sprzedaży
- odnowę asysty technicznej producenta
- wsparcie implementacji rozwiązań
- polskojęzyczne szkolenia.

Nowe portfolio produktowe w naszej ofercie



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AQUAFOLD

embarcadero

precise

Idera, Inc.

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Obszary funkcjonalne rozwiązań

- DATABASE DESIGN AND ARCHITECTURE
- DATABASE DEVELOPMENT
- DATABASE MONITORING AND PERFORMANCE
- DATABASE BACKUP AND ADMINISTRATION
- DATABASE SECURITY AND COMPLIANCE
- DATA AUTOMATION
- DATA LAKE PLATFORM
- SQL SERVER SUITES

Unikalne cechy rozwiązań Idera Inc.

- Sprawdzone rozwiązania – ponad 20 lat na rynku
- Multiplatformowość – ponad 30 obsługiwanych silników baz danych
- Kompleksowy zestaw narzędziowy dla architektów, deweloperów, administratorów, analityków baz danych
- Wyspecjalizowana funkcjonalność dla SQL Server
- Bezpieczeństwo, compliance i kontrola zmian
- Otwartość na nowe technologie i platformy

IDERA

embarcadero

AQUAFOLD

precise

Wybrane rozwiązania Idera:
AQUA DATA STUDIO

QDP Idera, Inc.

DATABASE DESIGN, DEVELOPMENT & ADMINISTRATION
AQUA DATA STUDIO

- Zwiększa produktywność administratorów i użytkowników pracujących z danymi i bazami danych
- Umożliwia rozwój i zarządzanie bazami danych, dostęp, import, eksport i wizualną analizę danych
- Obsługuje ponad 30 platform/silników bazodanowych i działa na wszystkich głównych systemach operacyjnych (Windows, Mac OS X, Linux)
- Przystosowane jest do obsługi baz danych relacyjnych, NoSQL i Cloud, dzięki temu dane niezależnie od źródła ich pochodzenia są łatwo i szybko dostępne

Do kogo adresowane jest AQUA DATA STUDIO?

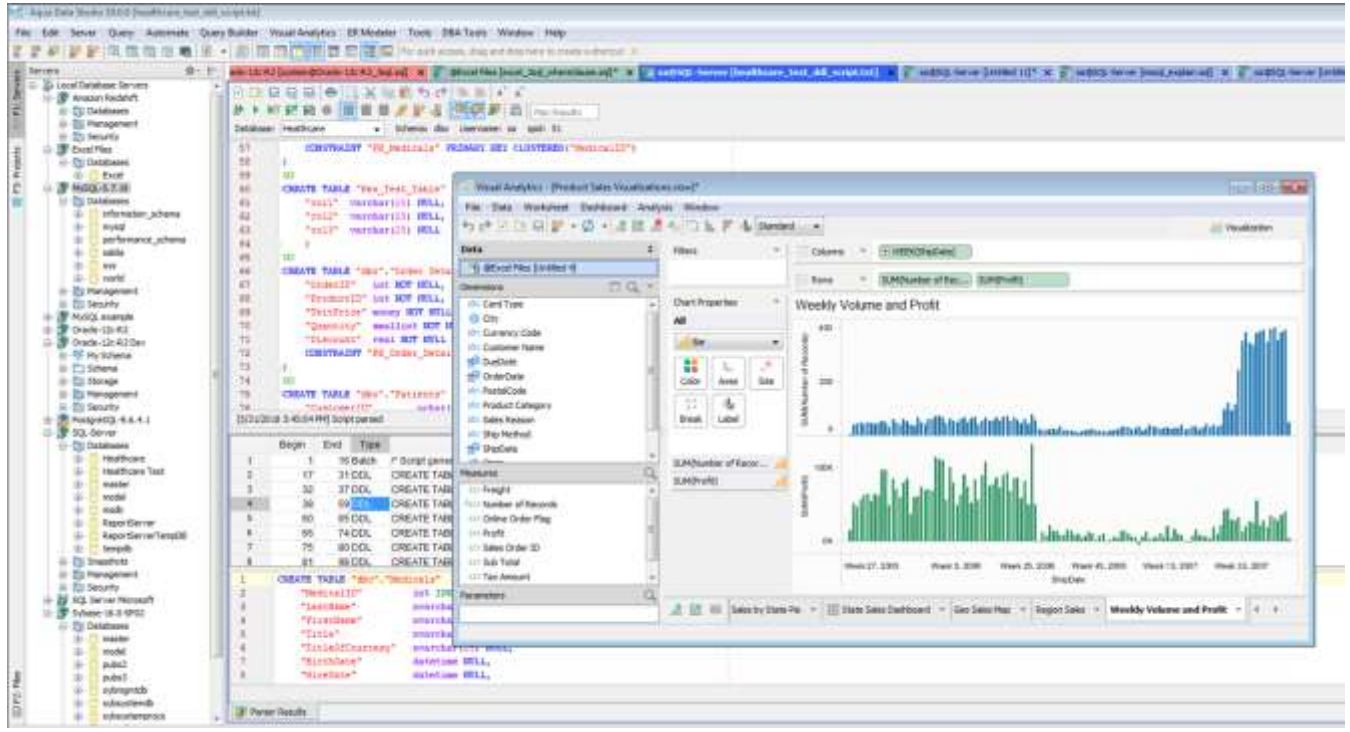
- Application Developer
- Application Database Administrator
- Database Developer
- Database Administrator
- Business Analyst
- Data Analyst
- Data Architect
- Data Scientist
- Data Modeler
- Systems Administrator
- IT Consultant
- IT Manager

Obsługa ponad 30 platform bazodanowych

- Amazon Redshift
- Apache Cassandra
- Apache Derby
- Apache Hive and Spark
- Azure SQL Database
- DB2 iSeries
- DB2 LUW
- DB2 z/OS
- Excel
- Generic JDBC
- Generic ODBC
- Google BigQuery
- Greenplum
- Informix
- MongoDB
- MS SQL Server
- MySQL
- Netezza
- Oracle
- ParAccel
- PostgreSQL
- SAP HANA
- SQLite
- Sybase Anywhere
- Sybase ASE
- Sybase IQ
- Teradata Aster
- Teradata
- Vertica
- VoltDB

Główne funkcjonalności AQUA DATA STUDIO

- Register Servers/Databases
- Database Navigator/Explorer
- Query Analyzer (sql editor)
- Query Builder
- Table Data Editor
- Visual Analytics
- Import/Export Data and DDL
- Schema/Data/File Compare
- ER Modeler
- Database Administration



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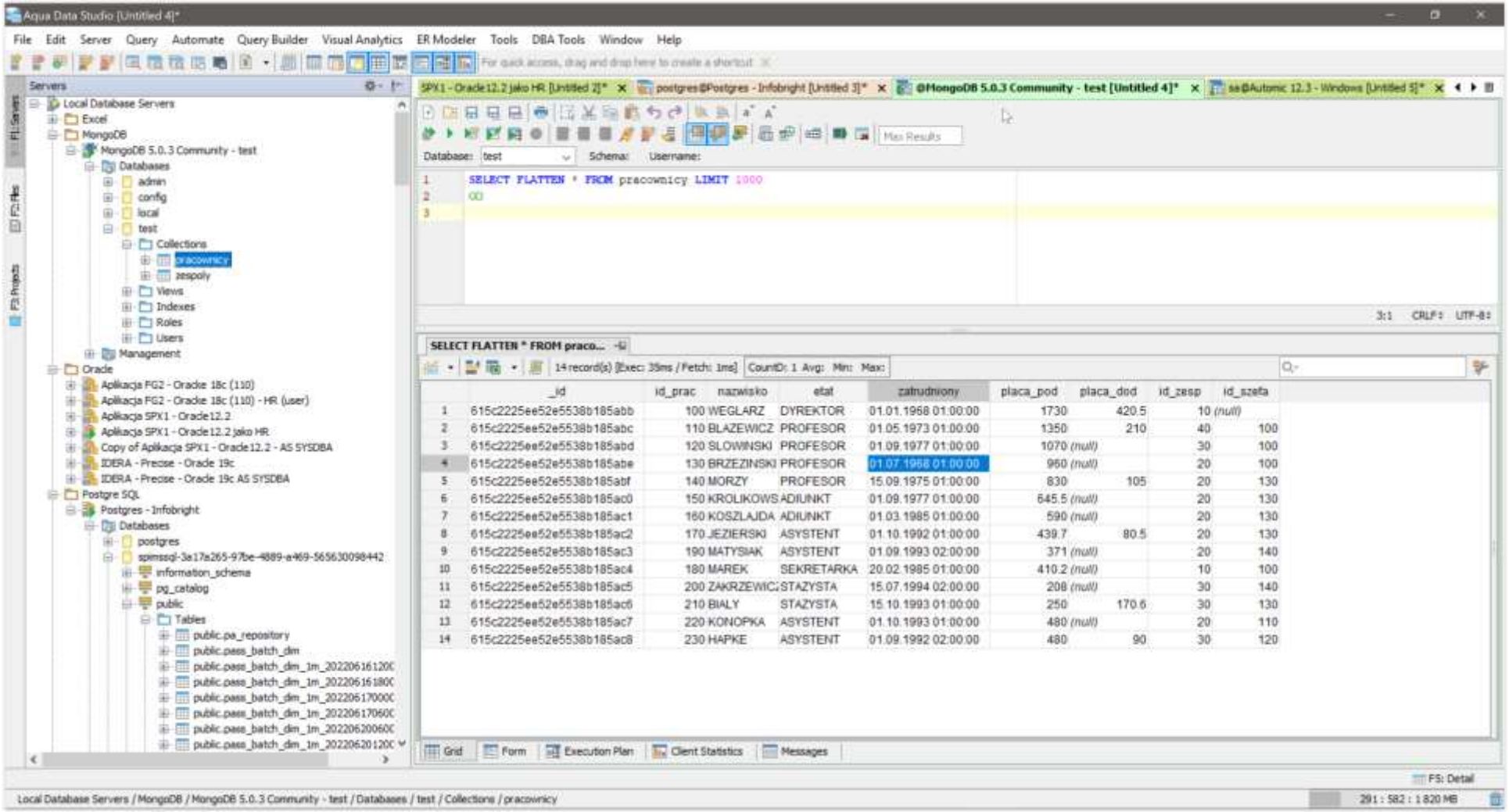
Jednolity interfejs dla wielu baz danych



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Podłączanie nie tylko baz danych ale i hostów

Servers

- SSH Servers
  - Aplikacja FG2 CentOS7
  - Aplikacja SPX - Centos
    - OS
      - Hostname: splexsrc112
      - Operating System: GNU/Linux
      - Kernel Name: Linux
      - Kernel Release: 3.10.0-1160.36.2.el7.x86_64
      - Kernel Version: #1 SMP Wed Jul 21 11:57:15 UTC 2021
      - Machine Hardware Name: x86_64
    - CPUs
      - cpu [user=0.95%, system=0.95%]
      - cpu0 [user=0%, system=0%]
      - cpu1 [user=0%, system=1.88%]
    - Memory
      - Memory Total: 3.68GB
      - Memory Free: 220.61MB
      - Memory Used: 796.35MB
      - Memory Buffers: 2.68GB
      - Memory Cached: 1.65GB
      - Memory User Used: 0Bytes
      - Swap Space Total: 2.99GB
      - Swap Space Free: 2.99GB
      - Swap Space Used: 520KB
    - Disks
      - sda [blocks=52428800]
      - sda1 [blocks=307200]
      - sda2 [blocks=3145728]
      - sda3 [blocks=48974848]
      - sr0 [blocks=1048575]
    - File Systems
      - /dev/sda1 [mounted on /boot, usage=86%, available=44.39MB]
      - /dev/sda3 [mounted on /, usage=65%, available=16.79GB]
      - devtmpfs [mounted on /dev, usage=0%, available=1.82GB]

Detail : Local Database Servers / SSH Servers / Aplikacja SPX - Centos / CPUs

CountD: 0 Avg: Min: Max:

	CPU	%User Usage	%System Usage	%Idle Usage	I/O Wait	Interrupt	Soft Interrupt
1	cpu	00,95%	00,95%	98,10%	18585	0	5119
2	cpu0	00,00%	00,00%	100,00%	10742	0	1996
3	cpu1	00,00%	01,89%	98,11%	7842	0	3122

Servers

- cpu1 [user=0%, system=1.88%]
  - Memory
    - Memory Total: 3.68GB
    - Memory Free: 220.61MB
    - Memory Used: 796.35MB
    - Memory Buffers: 2.68GB
    - Memory Cached: 1.65GB
    - Memory User Used: 0Bytes
    - Swap Space Total: 2.99GB
    - Swap Space Free: 2.99GB
    - Swap Space Used: 520KB
  - Disks
    - sda [blocks=52428800]
    - sda1 [blocks=307200]
    - sda2 [blocks=3145728]
    - sda3 [blocks=48974848]
    - sr0 [blocks=1048575]
  - File Systems
    - /dev/sda1 [mounted on /boot, usage=86%, available=44.39MB]
    - /dev/sda3 [mounted on /, usage=65%, available=16.79GB]
    - devtmpfs [mounted on /dev, usage=0%, available=1.82GB]
    - tmpfs [mounted on /dev/shm, usage=54%, available=877.39MB]
    - tmpfs [mounted on /run, usage=1%, available=1.82GB]
    - tmpfs [mounted on /run/user/1000, usage=0%, available=377.08MB]
    - tmpfs [mounted on /run/user/1004, usage=0%, available=377.08MB]
    - tmpfs [mounted on /run/user/42, usage=1%, available=377.07MB]
    - tmpfs [mounted on /sys/fs/cgroup, usage=0%, available=1.84GB]
  - Network Interfaces
    - ens33 [received=213.42MB, errors=0, drop=0], [transmitted=363.45MB, errors=0, drop=0]
    - lo [received=1.28MB, errors=0, drop=0], [transmitted=1.28MB, errors=0, drop=0]

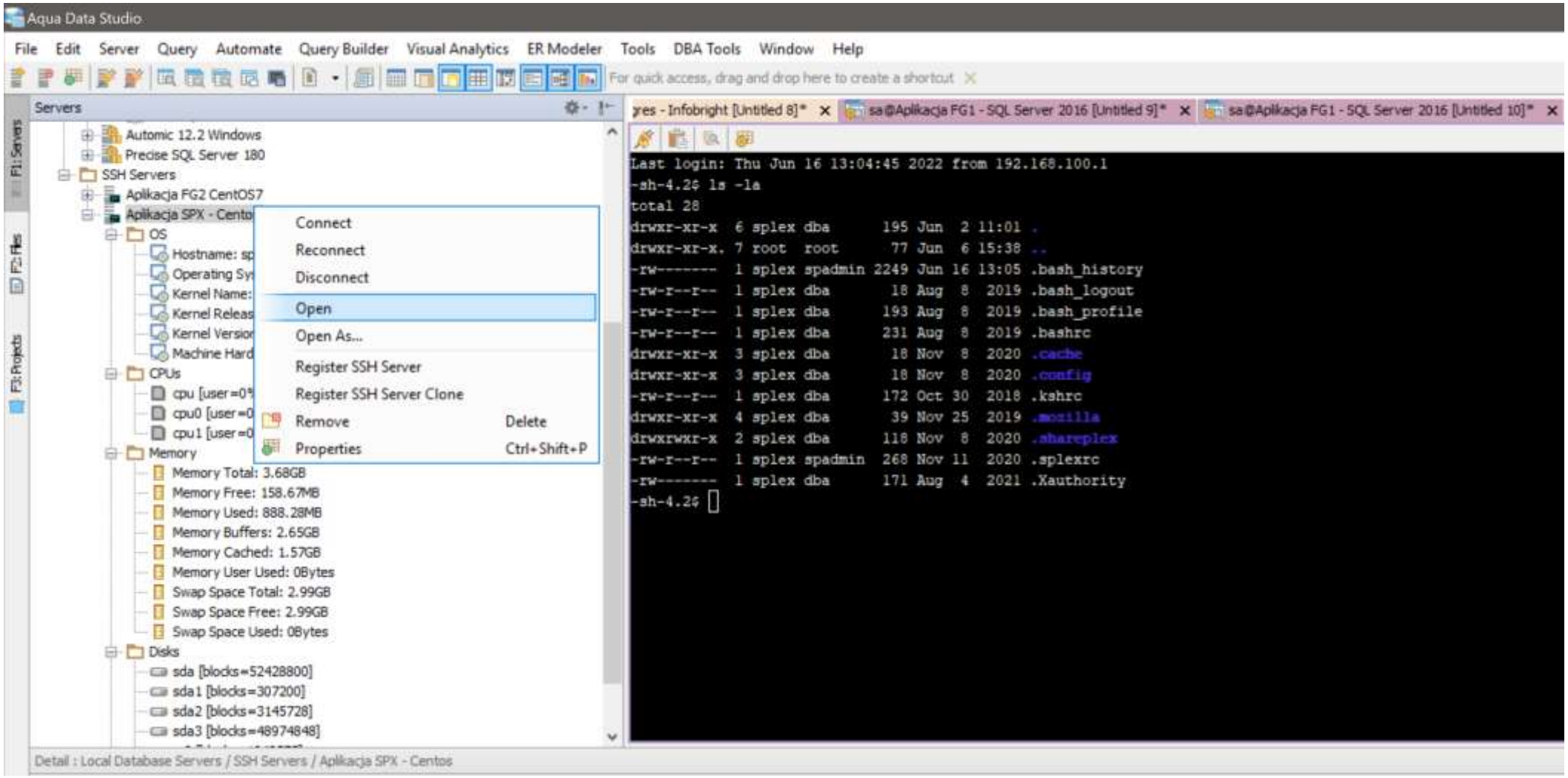
Detail : Local Database Servers / SSH Servers / Aplikacja SPX - Centos / File Systems

CountD: 0 Avg: Min: Max:

	File system	Total	Used	Available	Use%	Mounted on
1	devtmpfs	1960878080	0	1960878080	00,00%	/dev
2	tmpfs	1976979456	1056964608	920014848	54,00%	/dev/shm
3	tmpfs	1976979456	12906496	1964072960	01,00%	/run
4	tmpfs	1976979456	0	1976979456	00,00%	/sys/fs/cgroup
5	/dev/sda3	50136244224	32100610048	18035634176	65,00%	/
6	/dev/sda1	311070720	264515584	46555136	86,00%	/boot
7	tmpfs	395399168	12288	395386880	01,00%	/run/user/42
8	tmpfs	395399168	0	395399168	00,00%	/run/user/1000
9	tmpfs	395399168	0	395399168	00,00%	/run/user/1004

ocal Database Servers / SSH Servers / Aplikacja SPX - Centos / File Systems

Podłączanie nie tylko baz danych ale i hostów



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Kod SQL, PL/SQL, T-SQL (Query Analyzer)

acja SPX1 - Oracle12.2 jako HR [Untitled 2]* | postgres@Postgres - Infobright [Untitled 3]* | @MongoDB 5.0.3 Community - test [Untitled 4]* | sa@Automic 12.3 - Windows [Untitled 5]*

Max Results

Database: test Schema: Username:

```
1  SELECT FLATTEN * FROM pracownicy LIMIT 1000
2  GO
3
```

pracownicy [<ALL>]
zespoly [<ALL>]
SEL_EM Wybranie wszystkich pol z tabeli pracownikow

1:23 CRLF UTF-8

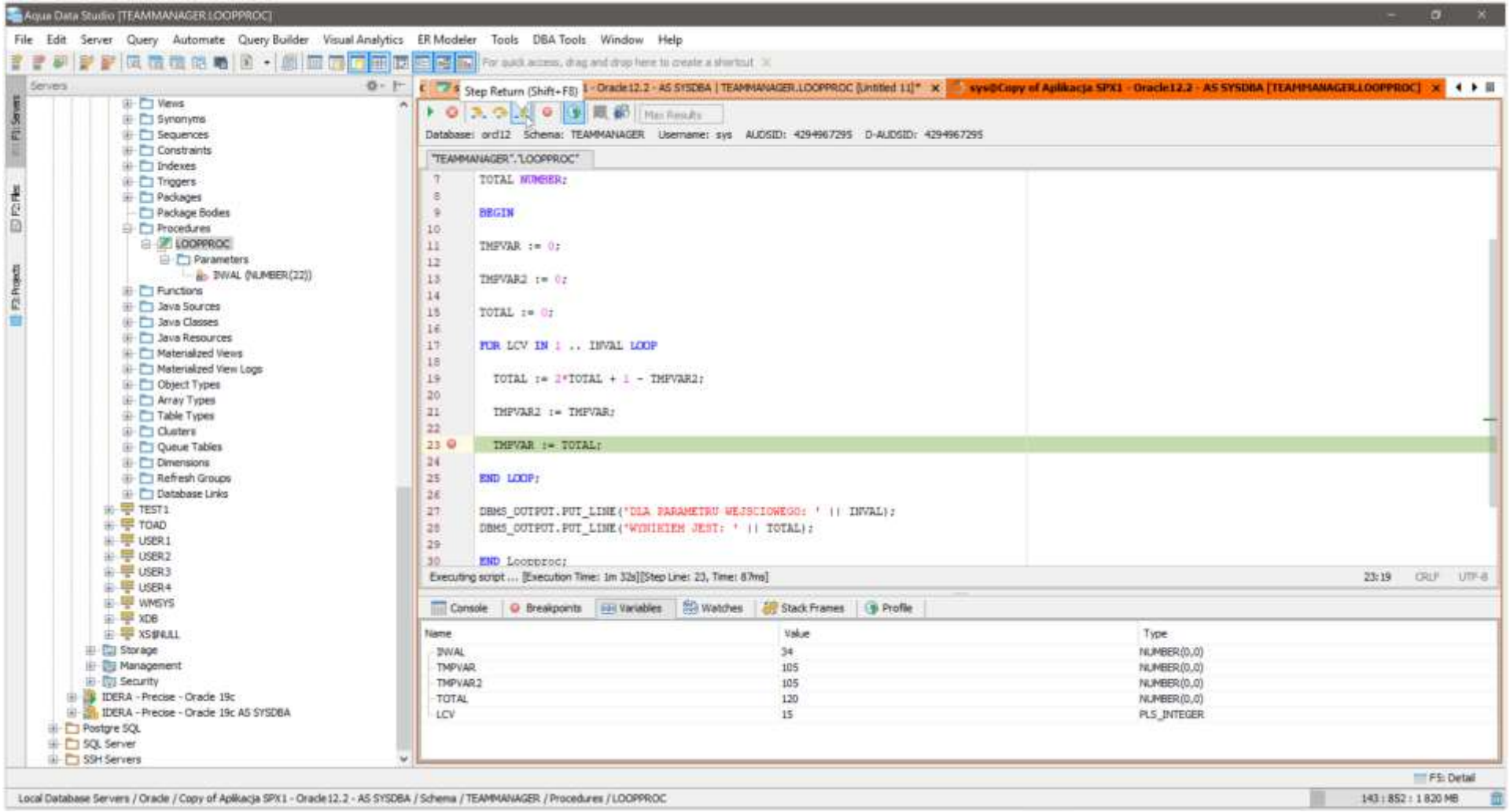
SELECT FLATTEN * FROM praco...

14 record(s) [Exec: 35ms / Fetch: 1ms] CountD: 1 Avg: Min: Max:

	_id	id_prac	nazwisko	etat	zatrudniony	placa_pod	placa_dod	id_zesp	id_szefa
1	615c2225ee52e5538b185abb	100	WEGLARZ	DYREKTOR	01.01.1968 01:00:00	1730	420.5	10	(null)
2	615c2225ee52e5538b185abc	110	BLAZEWICZ	PROFESOR	01.05.1973 01:00:00	1350	210	40	100
3	615c2225ee52e5538b185abd	120	SLOWINSKI	PROFESOR	01.09.1977 01:00:00	1070	(null)	30	100
4	615c2225ee52e5538b185abe	130	BRZEZINSKI	PROFESOR	01.07.1968 01:00:00	960	(null)	20	100
5	615c2225ee52e5538b185abf	140	MORZY	PROFESOR	15.09.1975 01:00:00	830	105	20	130
6	615c2225ee52e5538b185ac0	150	KROLIKOWS	ADIUNKT	01.09.1977 01:00:00	645.5	(null)	20	130
7	615c2225ee52e5538b185ac1	160	KOSZLAJDA	ADIUNKT	01.03.1985 01:00:00	590	(null)	20	130
8	615c2225ee52e5538b185ac2	170	JEZIERSKI	ASYSTENT	01.10.1992 01:00:00	439.7	80.5	20	130
9	615c2225ee52e5538b185ac3	190	MATYSIAK	ASYSTENT	01.09.1993 02:00:00	371	(null)	20	140
10	615c2225ee52e5538b185ac4	180	MAREK	SEKRETARKA	20.02.1985 01:00:00	410.2	(null)	10	100
11	615c2225ee52e5538b185ac5	200	ZAKRZEWIC	STAZYSTA	15.07.1994 02:00:00	208	(null)	30	140
12	615c2225ee52e5538b185ac6	210	BIALY	STAZYSTA	15.10.1993 01:00:00	250	170.6	30	130
13	615c2225ee52e5538b185ac7	220	KONOPKA	ASYSTENT	01.10.1993 01:00:00	480	(null)	20	110
14	615c2225ee52e5538b185ac8	230	HAPKE	ASYSTENT	01.09.1992 02:00:00	480	90	30	120

Grid | Form | Execution Plan | Client Statistics | Messages

Kod SQL, PL/SQL, T-SQL – debugowanie kodu



AQUAFOLD

QDP

Tworzenie zapytań bez SQL'a (Visual Query Builder)

Query Builder - Aplikacja SPX1 - Oracle12.2 [Query3]*

File Connection Query Worksheet Window

Schema: HR (system)

Table: DEPARTMENTS, EMPLOYEES, JOB_HISTORY, JOBS, LOCATIONS, PRAC_EMPLOYEES, PRAC_KOB_CDC, PRAC_KOB_CDC_CZAS_SOURCE

View: EMP_DETAILS_VIEW

Worksheet: Main

Favorite

Where: 1. SALARY BETWEEN 300... 2. HIRE_DATE BETWEEN ...

Filter Logic: 1 AND 2

Group By

Having

Order By: LAST_NAME

Union

Select: FIRST_NAME, LAST_NAME, DEPARTMENT_NAME, COUNTRY_NAME, CITY, SALARY

EMPLOYEES: * (All Columns), EMPLOYEE_ID, FIRST_NAME, LAST_NAME, EMAIL, PHONE_NUMBER, HIRE_DATE, JOB_ID, SALARY, COMMISSION_PCT, MANAGER_ID, DEPARTMENT_ID, SHAREPLEX_SOURCE_TIME

DEPARTMENTS: * (All Columns), DEPARTMENT_ID, DEPARTMENT_NAME, MANAGER_ID, LOCATION_ID

LOCATIONS: * (All Columns), LOCATION_ID, STREET_ADDRESS, POSTAL_CODE, CITY, STATE_PROVINCE, COUNTRY_ID

COUNTRY_ID, COUNTRY_NAME, REGION_ID

Create Alias... / Functions / Remove

None, AVG, COUNT, MAX, MIN, SUM, Custom Expression

Main

```
4       "DEPARTMENTS"."DEPARTMENT_NAME",
5       "COUNTRIES"."COUNTRY_NAME",
6       "LOCATIONS"."CITY",
7       "EMPLOYEES"."SALARY"
8   FROM
9       "HR"."COUNTRIES" "COUNTRIES"
10          INNER JOIN "HR"."REGIONS" "REGIONS"
11          ON "COUNTRIES"."REGION_ID" = "REGIONS"."REGION_ID"
12              INNER JOIN "HR"."LOCATIONS" "LOCATIONS"
13              ON "COUNTRIES"."COUNTRY_ID" = "LOCATIONS"."COUNTRY_ID"
```

25:1 CRLF UTF-8

SQL Grid Messages

ord12

AQUAFOLD

QDP

Tworzenie zapytań bez SQL'a (Visual Query Builder)

Query Builder - Aplikacja SPX1 - Oracle12.2 [Query3]*

File Connection Query Worksheet Window

Schema: HR (system), TEST1 (system)

Table: DLUZNICY, DLUZNICY_AKTUALIZACJA, ELEKTROWNIA, HANDLOWIEC_01, HURTOWNIA, INKASENT_01, WYPLATY, WYPLATY_AKTUALIZACJA

View

Where: 1. SALARY BETWEEN 300...

Filter Logic: 1 AND 2

Group By

Having

Order By: LAST_NAME

Union

Select: FIRST_NAME, LAST_NAME, DEPARTMENT_NAME, COUNTRY_NAME, CITY, SALARY

EMPLOYEES: * (All Columns), EMPLOYEE_ID, FIRST_NAME, LAST_NAME, EMAIL, PHONE_NUMBER, HIRE_DATE, JOB_ID, SALARY, COMMISSION_PCT, MANAGER_ID, DEPARTMENT_ID, SHAREPLEX_SOURCE_TIME

DEPARTMENTS: * (All Columns), DEPARTMENT_ID, DEPARTMENT_NAME, MANAGER_ID, LOCATION_ID

LOCATIONS: * (All Columns), LOCATION_ID, STREET_ADDRESS, POSTAL_CODE, CITY, STATE_PROVINCE, COUNTRY_ID

COUNTRIES: * (All Columns), COUNTRY_ID, COUNTRY_NAME, REGION_ID

REGIONS: * (All Columns), REGION_ID, REGION_NAME

Worksheet: Zarobki pracowników, Zaległości dłużników

Favorite

Zarobki pracowników | Zaległości dłużników

38 record(s) [Exec: 0ms / Fetch: 0ms] CountD: 0 Avg: Min: Max:

	FIRST_NAME	LAST_NAME	DEPARTMENT_NAME	COUNTRY_NAME	CITY	SALARY
1	Sundar	Ande	Sales	United Kingdom	Oxford	6400
2	David	Austin	IT	United States of America	Southlake	4800
3	Amit	Banda	Sales	United Kingdom	Oxford	6200
4	Sarah	Bell	Shipping	United States of America	South San Francisco	4000
5	Laura	Bissot	Shipping	United States of America	South San Francisco	3300
6	Alexis	Bull	Shipping	United States of America	South San Francisco	4100
7	Anthony	Cabrio	Shipping	United States of America	South San Francisco	3000
8	Kelly	Chung	Shipping	United States of America	South San Francisco	3800
9	Curtis	Davies	Shipping	United States of America	South San Francisco	3100
10	Julia	Dellinger	Shipping	United States of America	South San Francisco	3400
11	Jennifer	Dilly	Shipping	United States of America	South San Francisco	3600

SQL | Grid | Messages

ord12

AQUAFOLD

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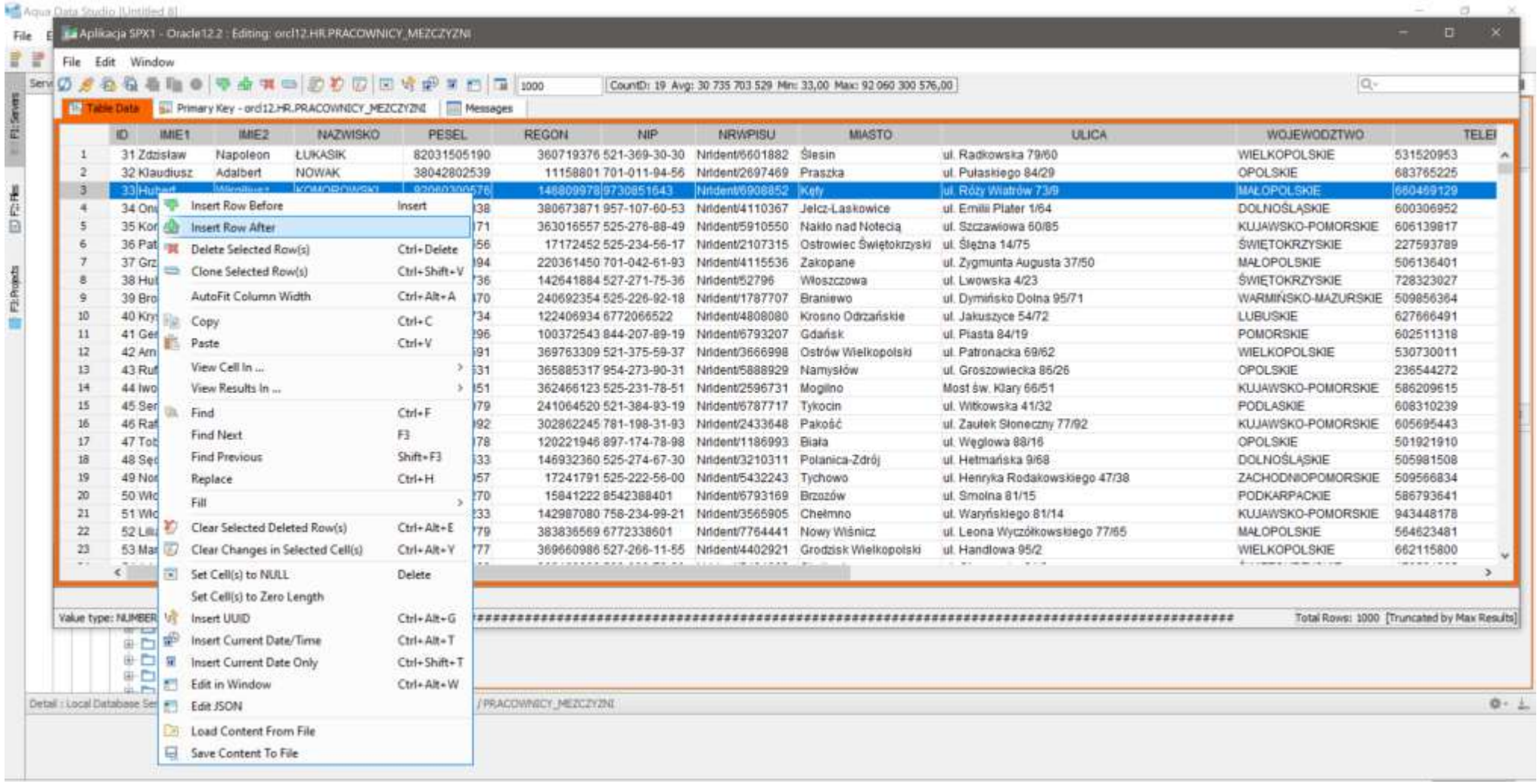
Edycja danych w oddzielnym oknie (Table Data Editor)



AQUAFOLD

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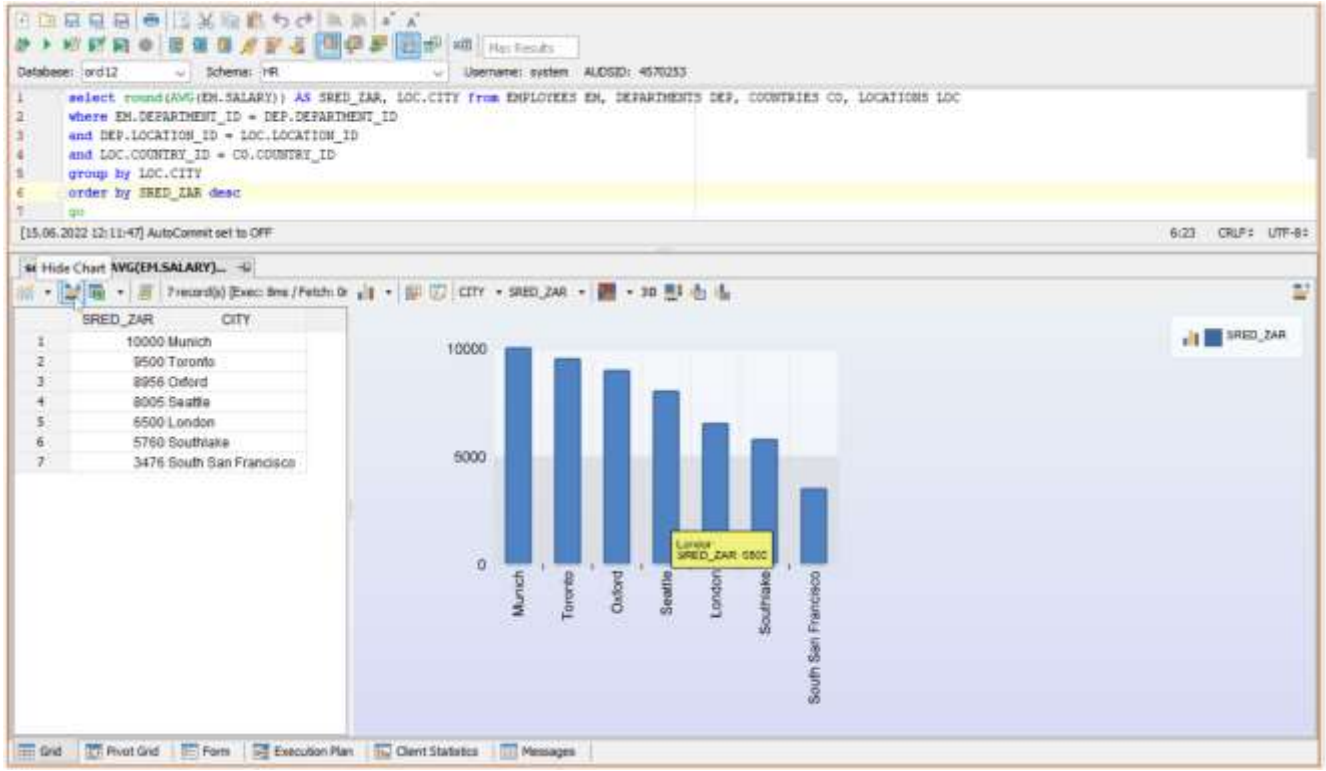
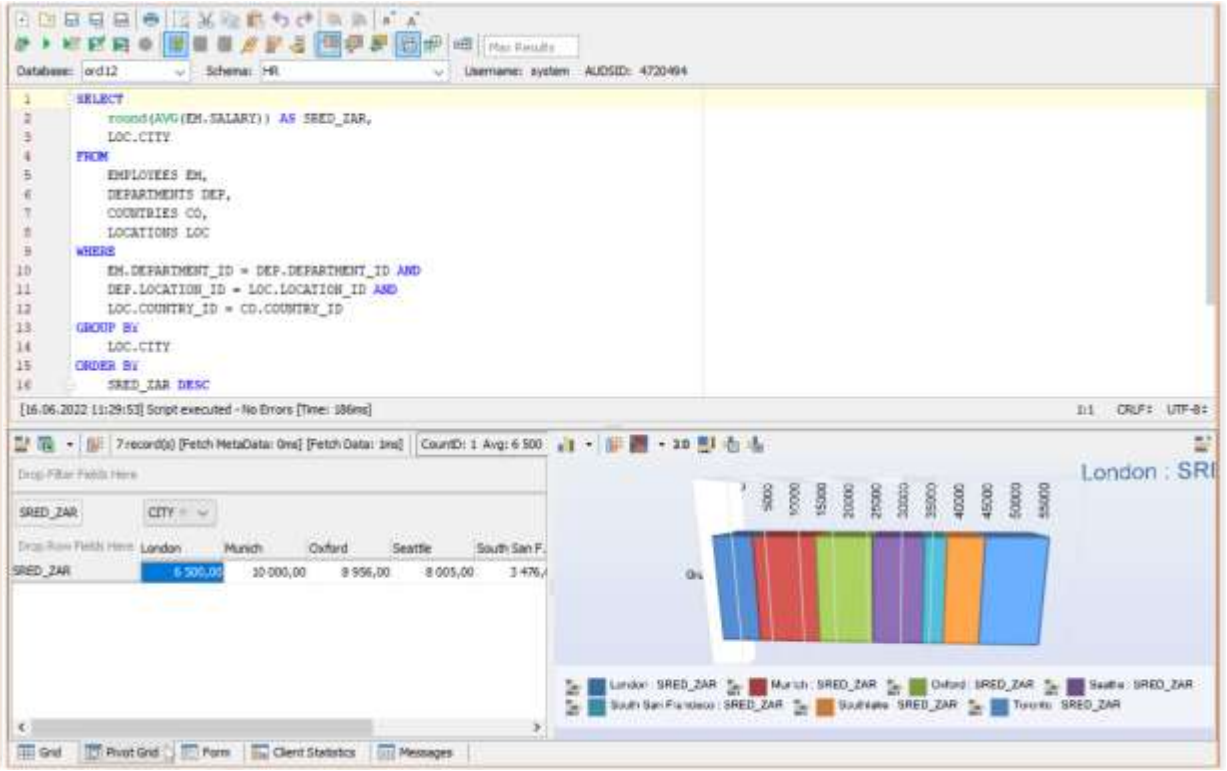
Prezentacja danych i analityka (Visual Analytics)

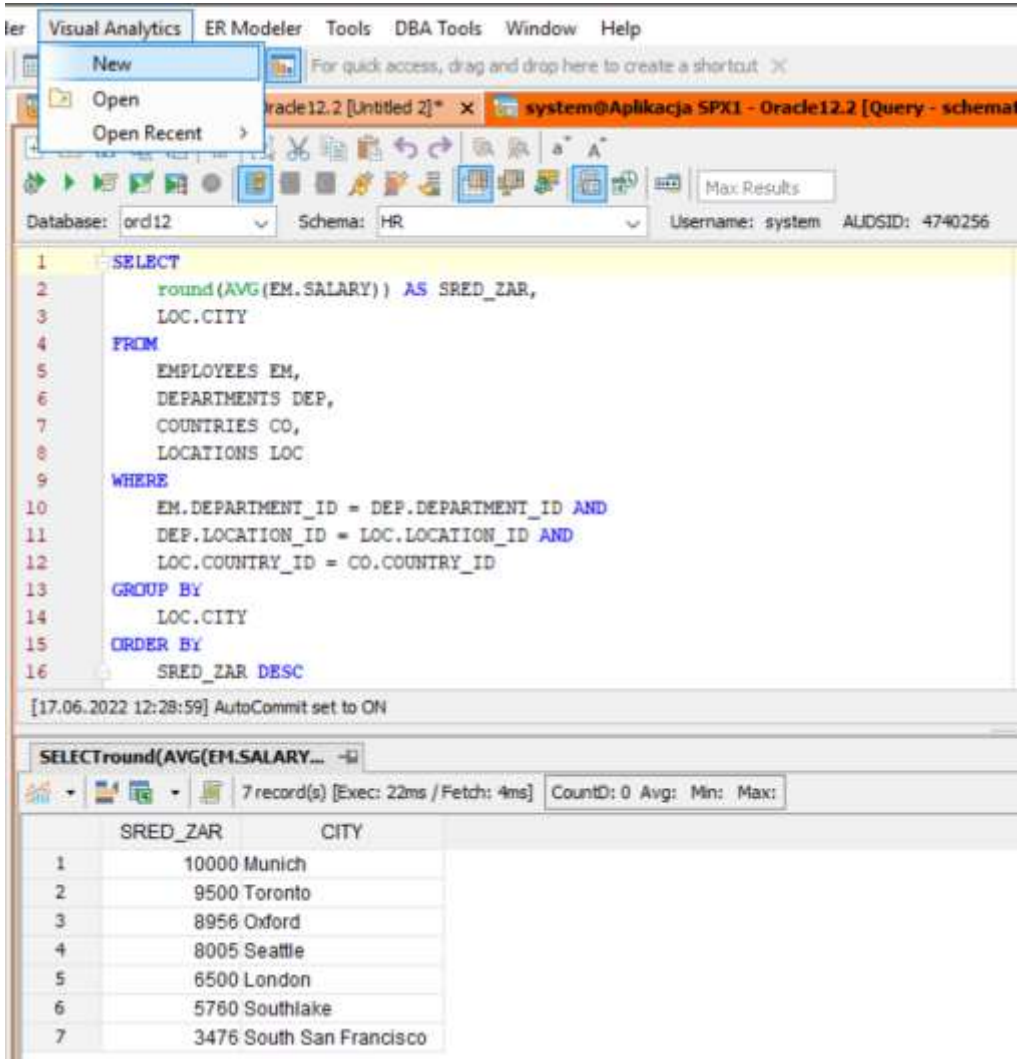


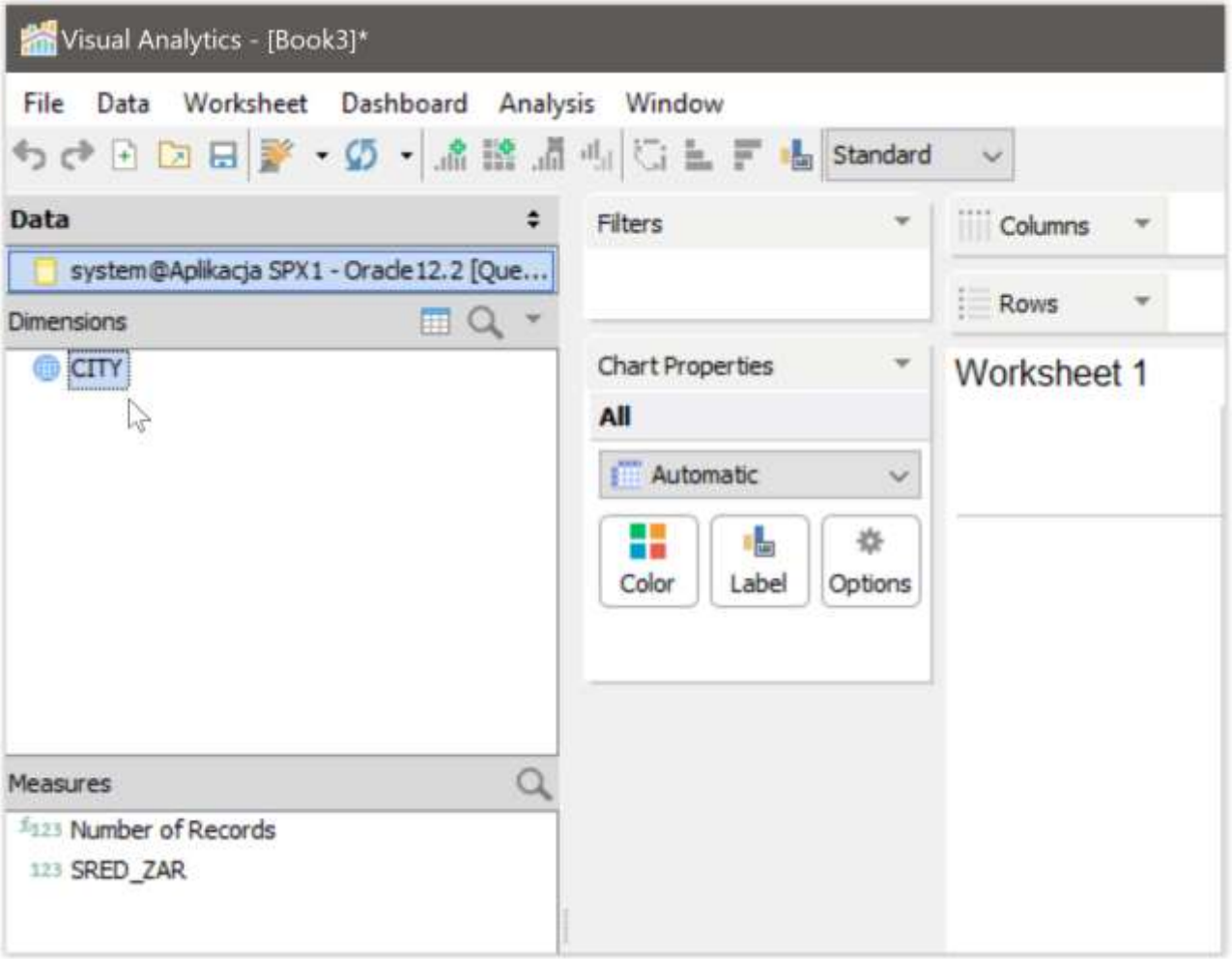


AQUAFOLD

QDP

Prezentacja danych i analityka (Visual Analytics)

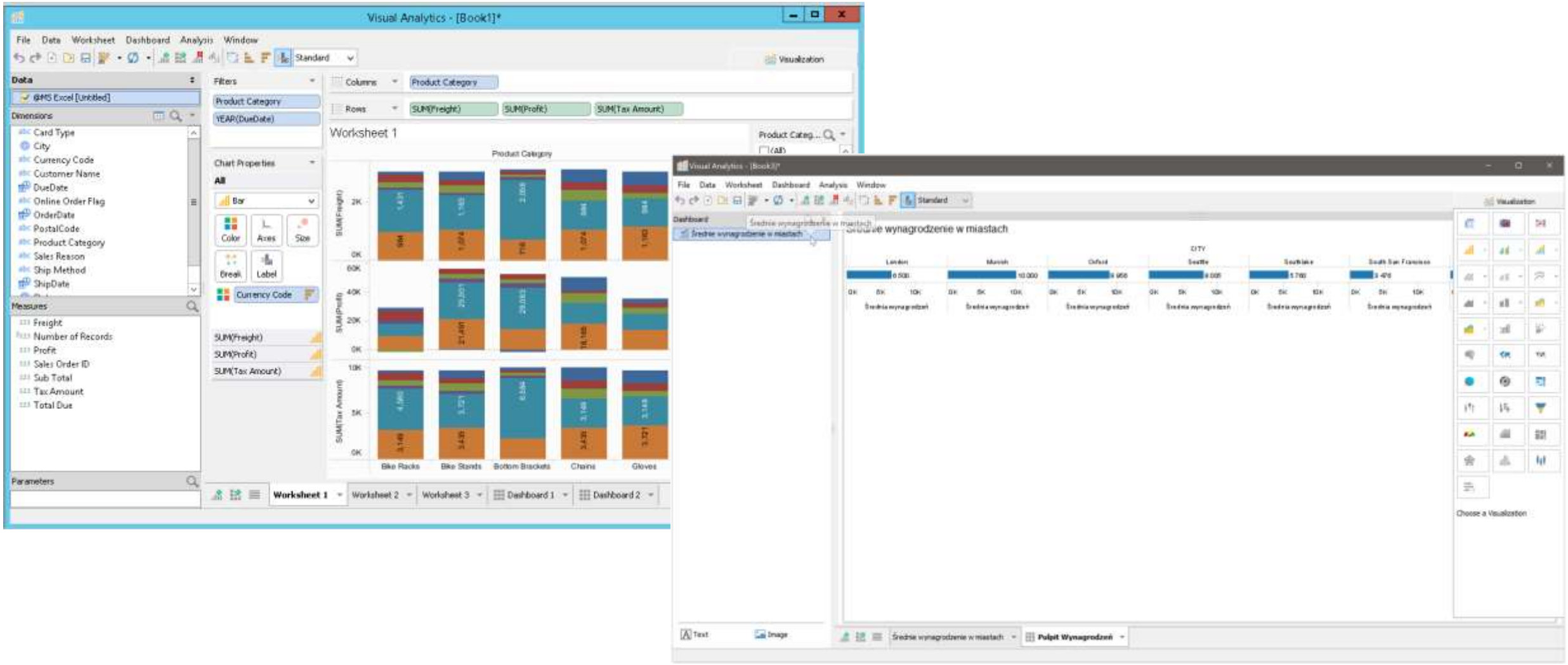




AQUAFOLD

QDP

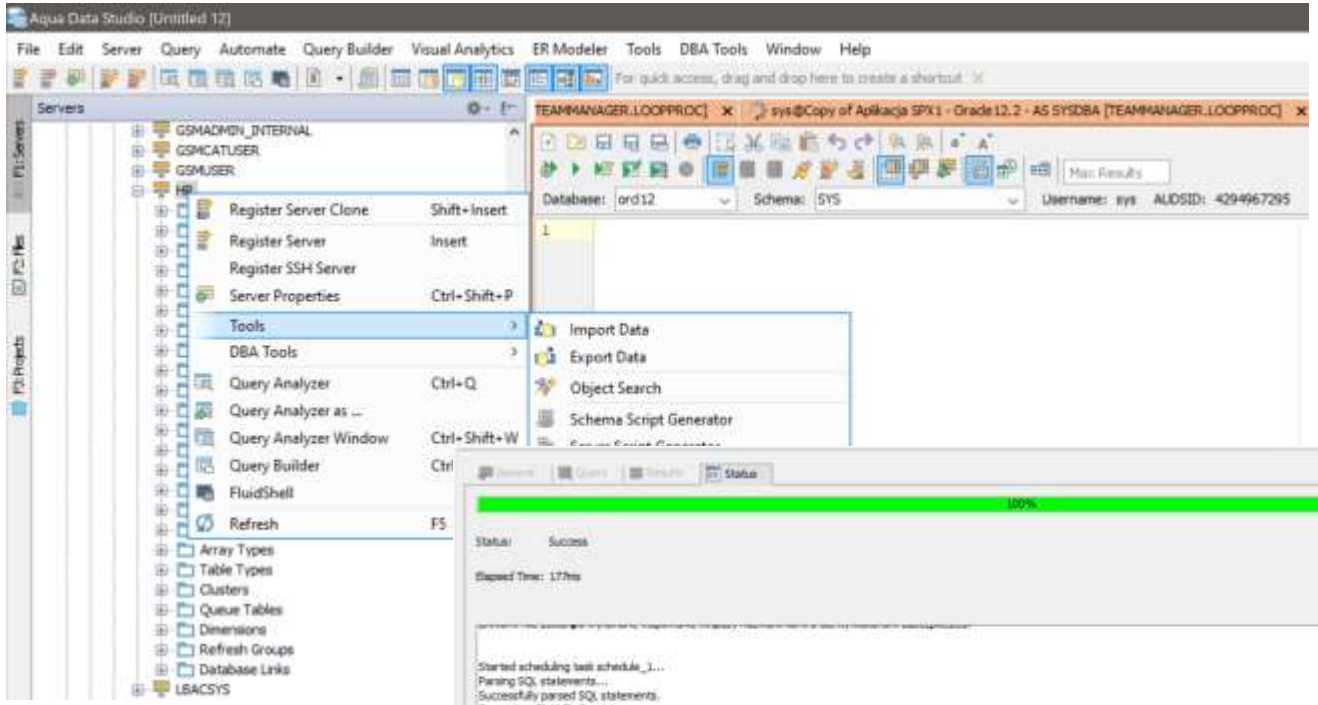
Prezentacja danych i analityka (Visual Analytics)

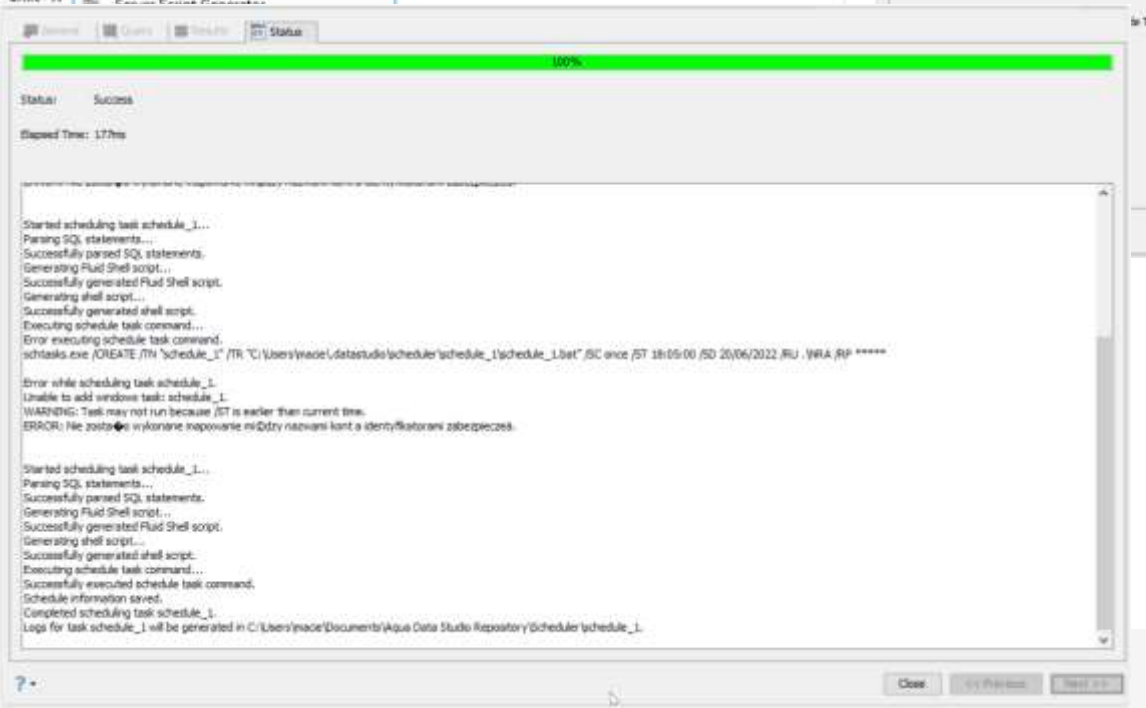


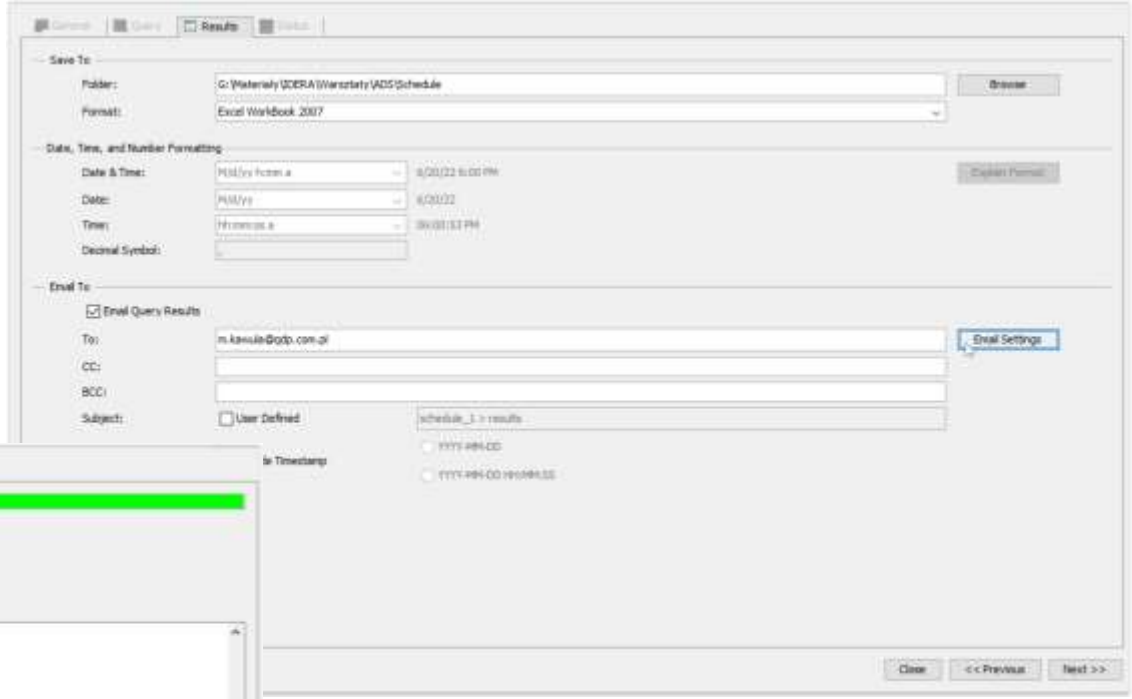
AQUAFOLD

QDP

Automatyzacja zadań



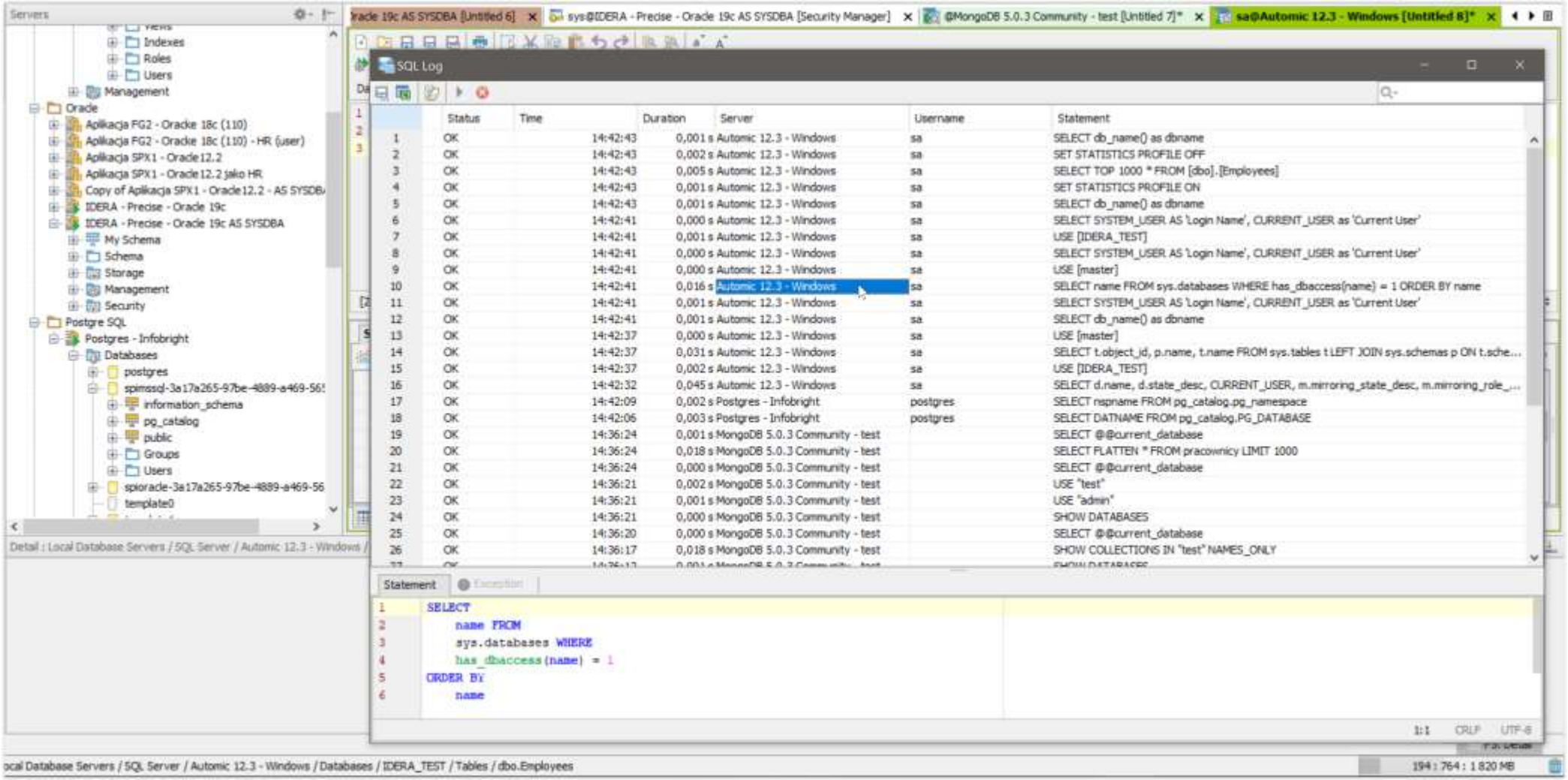




AQUAFOLD

QDP

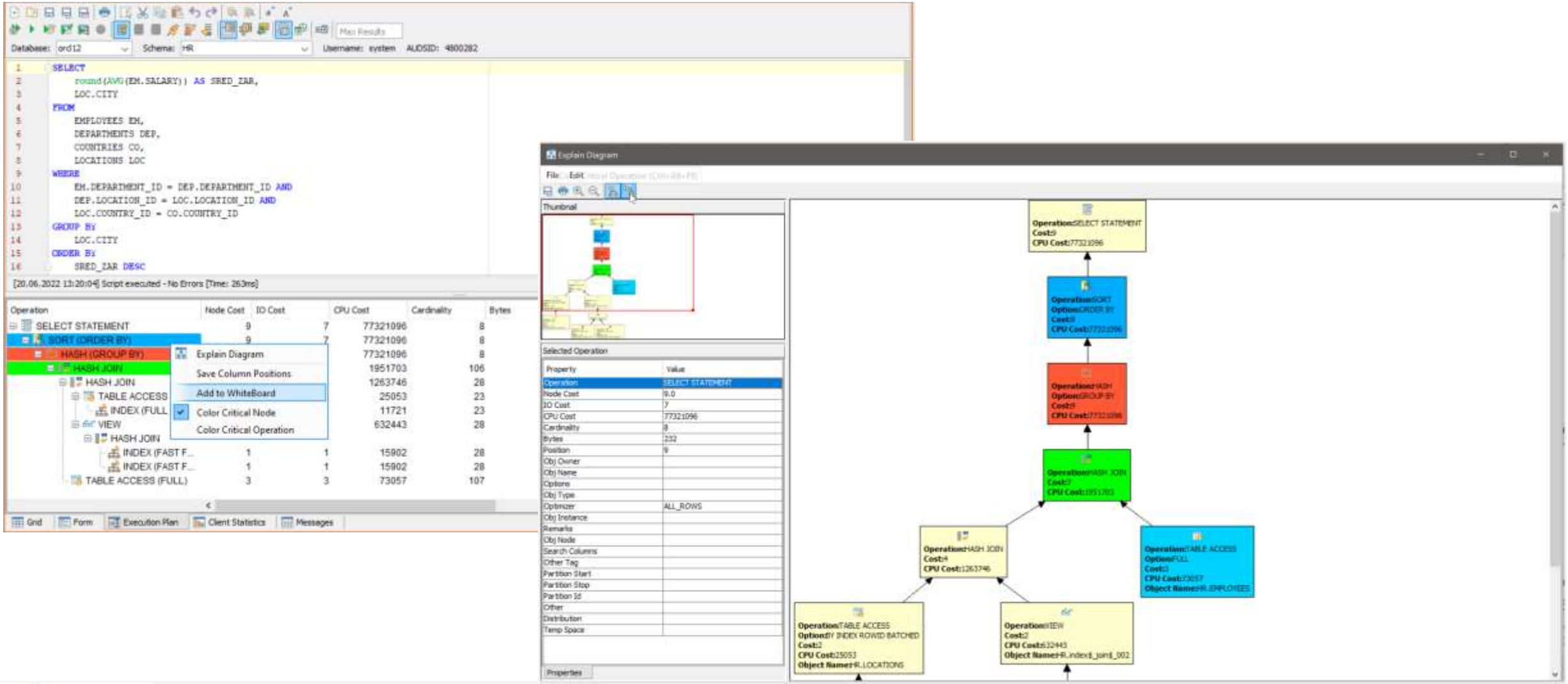
Logowanie zapytań SQL



AQUAFOLD

QDP

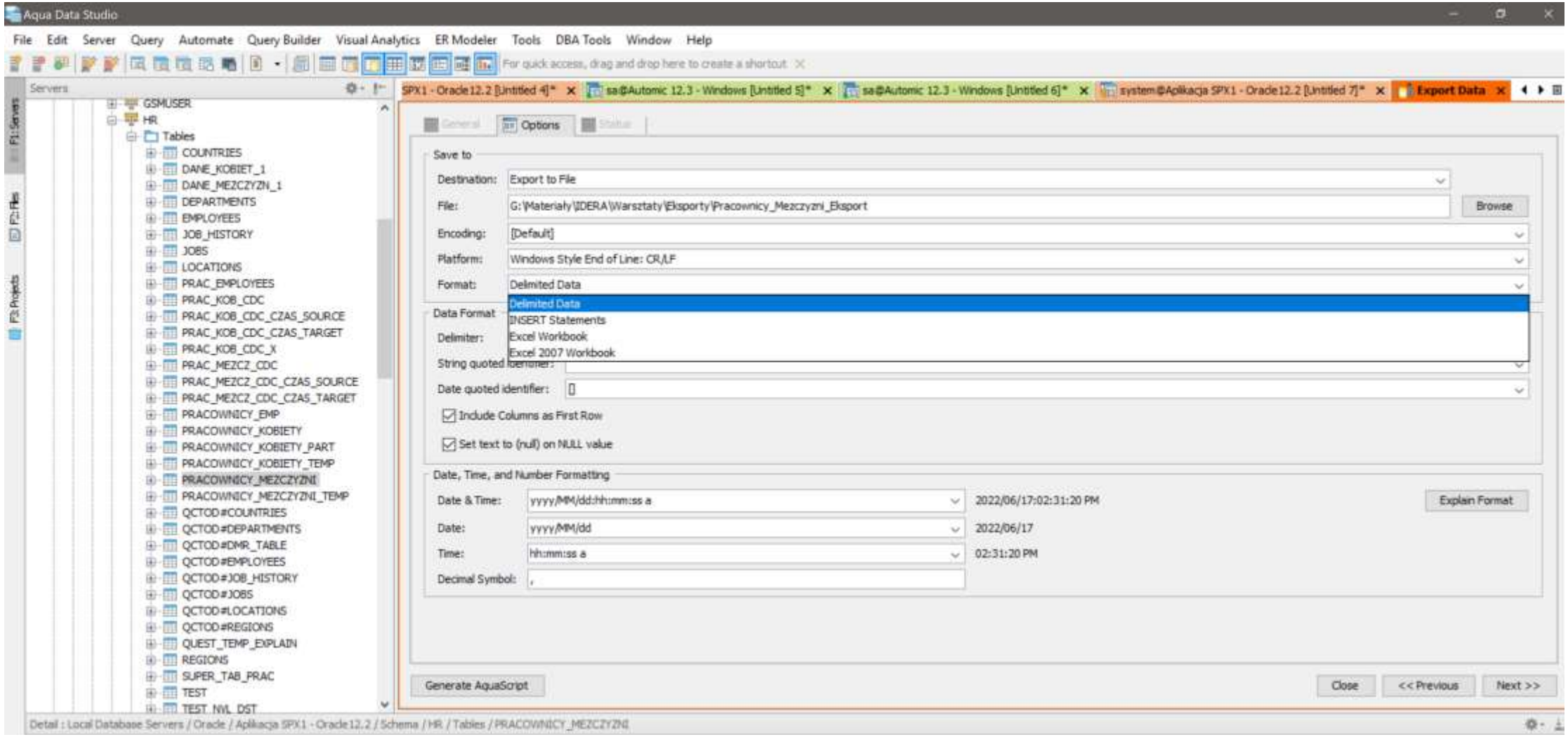
Analiza zapytania SQL - koszt



AQUAFOLD

QDP

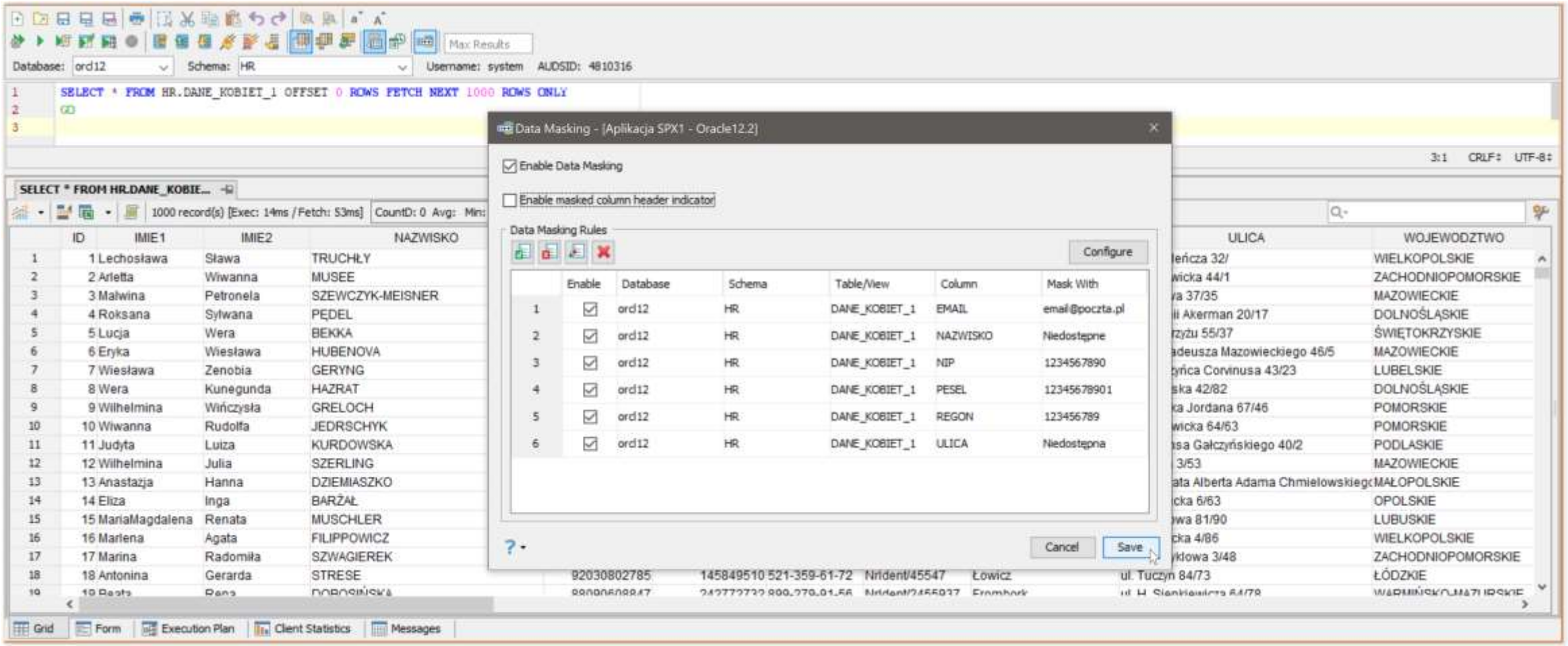
Eksport danych – **format pliku wyjściowego**



AQUAFOLD

QDP

Anonimizacja **danych wrażliwych**



AQUAFOLD

QDP

Anonimizacja **danych wrażliwych**

Database: ord12 Schema: HR Username: system AUDSID: 4810316

```
SELECT * FROM HR.DANE_KOBIET_1 OFFSET 0 ROWS FETCH NEXT 1000 ROWS ONLY
GO
```

[21.06.2022 15:44:03] AutoCommit set to ON

SELECT * FROM HR.DANE_KOBIE...

1000 record(s) [Exec: 2ms / Fetch: 42ms] CountD: 0 Avg: Min: Max:

	ID	IMIE1	IMIE2	NAZWISKO	PESEL	REGON	NIP	NRWPISU	MIASTO	ULICA	WOJEWODZTWO	TELEFON	DEPARTA
1	1	Lechosława	Sława	Niedostępne	12345678901	123456789	1234567890	Nrident/6536962	Miłosław	Niedostępna	WIELKOPOLSKIE	228239715	Dział Zakupów
2	2	Arletta	Wiwanna	Niedostępne	12345678901	123456789	1234567890	Nrident/1003856	Goleniów	Niedostępna	ZACHODNIOPOMORSKIE	338213890	Dział IT
3	3	Malwina	Petronela	Niedostępne	12345678901	123456789	1234567890	Nrident/3849275	Zakroczym	Niedostępna	MAZOWIECKIE	226221176	Dział Handlowy
4	4	Roksana	Sylwana	Niedostępne	12345678901	123456789	1234567890	Nrident/7575800	Żarów	Niedostępna	DOLNOŚLĄSKIE	753070590	Dział GTM
5	5	Lucja	Wera	Niedostępne	12345678901	123456789	1234567890	Nrident/5721137	Małogoszcz	Niedostępna	ŚWIĘTOKRZYSKIE	602121702	Dział Prawny
6	6	Eryka	Wiesława	Niedostępne	12345678901	123456789	1234567890	Nrident/4325637	Halinów	Niedostępna	MAZOWIECKIE	509199613	Dział Planowania Produkcji
7	7	Wiesława	Zenobia	Niedostępne	12345678901	123456789	1234567890	Nrident/2722843	Ostrów Lubelski	Niedostępna	LUBELSKIE	604882305	Produkcja
8	8	Wera	Kunegunda	Niedostępne	12345678901	123456789	1234567890	Nrident/4433959	Siechnice	Niedostępna	DOLNOŚLĄSKIE	502047422	Dział Zakupów
9	9	Wilhelmina	Wińczysła	Niedostępne	12345678901	123456789	1234567890	Nrident/4660173	Gdynia	Niedostępna	POMORSKIE	604984797	Dział Badań i Rozwoju
10	10	Wiwanna	Rudolfa	Niedostępne	12345678901	123456789	1234567890	Nrident/6554887	Gdańsk	Niedostępna	POMORSKIE	609065699	Dział Marketingu
11	11	Judyta	Luiza	Niedostępne	12345678901	123456789	1234567890	Nrident/3076545	Augustów	Niedostępna	PODLASKIE	602711388	Dział Planowania Produkcji
12	12	Wilhelmina	Julia	Niedostępne	12345678901	123456789	1234567890	Nrident/500646	Ząbki	Niedostępna	MAZOWIECKIE	3611556	Dział Handlowy
13	13	Anastazja	Hanna	Niedostępne	12345678901	123456789	1234567890	Nrident/5780932	Skała	Niedostępna	MAŁOPOLSKIE	895350227	Dział Logistyki
14	14	Eliza	Inga	Niedostępne	12345678901	123456789	1234567890	Nrident/2879854	Ozimek	Niedostępna	OPOLSKIE	501717007	Dział Public Relations
15	15	MariaMagdalena	Renata	Niedostępne	12345678901	123456789	1234567890	Nrident/3737742	Szprotawa	Niedostępna	LUBUSKIE	607760965	Dział Graficzny
16	16	Marlena	Agata	Niedostępne	12345678901	123456789	1234567890	Nrident/7705686	Wysoka	Niedostępna	WIELKOPOLSKIE	608081270	Dział IT
17	17	Marina	Radomiła	Niedostępne	12345678901	123456789	1234567890	Nrident/6417326	Czaplinek	Niedostępna	ZACHODNIOPOMORSKIE	225248365	Dział Planowania Produkcji
18	18	Antonina	Gerarda	Niedostępne	12345678901	123456789	1234567890	Nrident/45547	Łowicz	Niedostępna	ŁÓDZKIE	612214862	Dział HR
19	19	Beata	Rena	Niedostępne	12345678901	123456789	1234567890	Nrident/2455937	Frombork	Niedostępna	WARMIŃSKO-MAZURSKIE	604647030	Dział Mediów&Digital

Grid | Form | Execution Plan | Client Statistics | Messages

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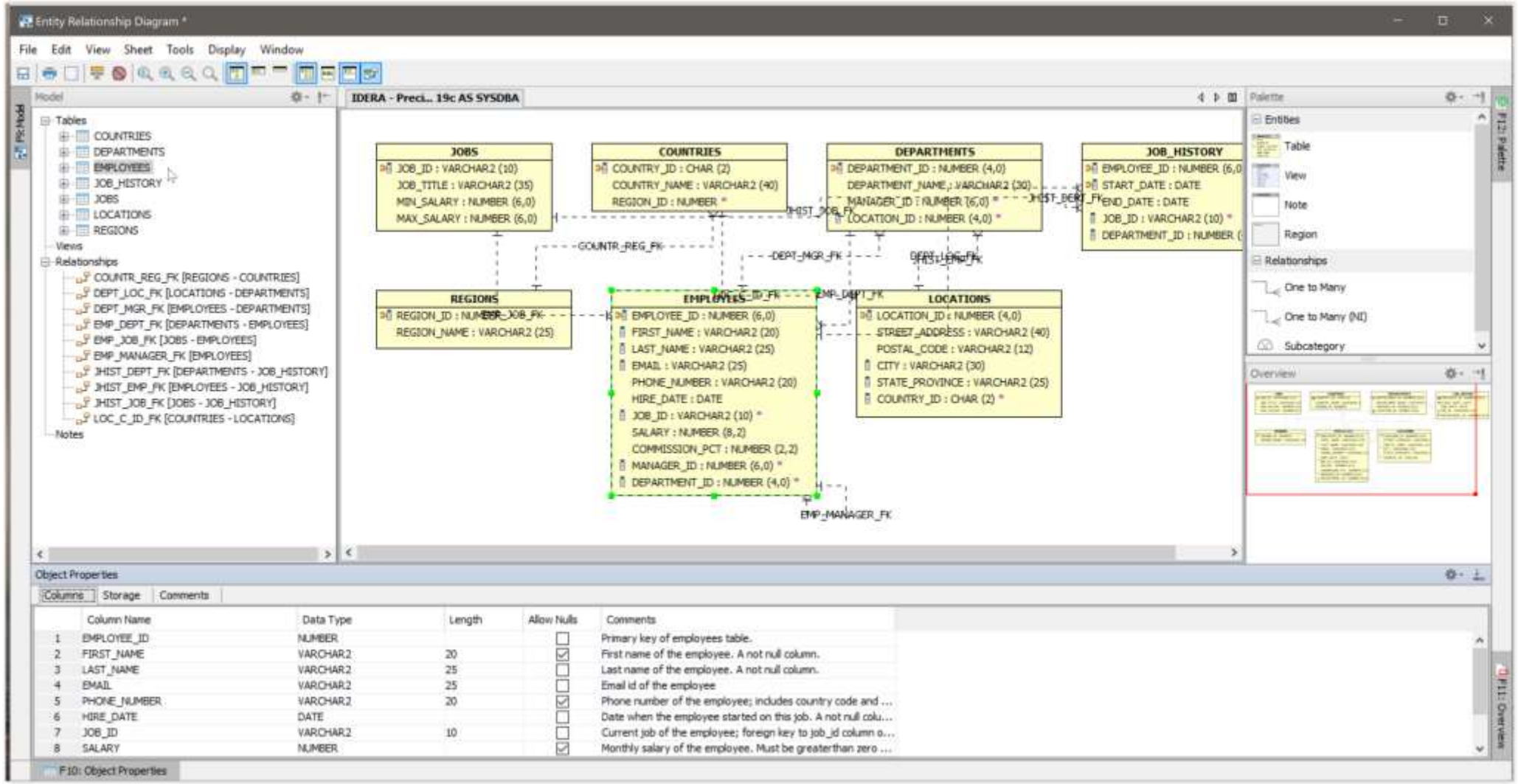
Architektura i Modelowanie (ER Modeler)



AQUAFOLD

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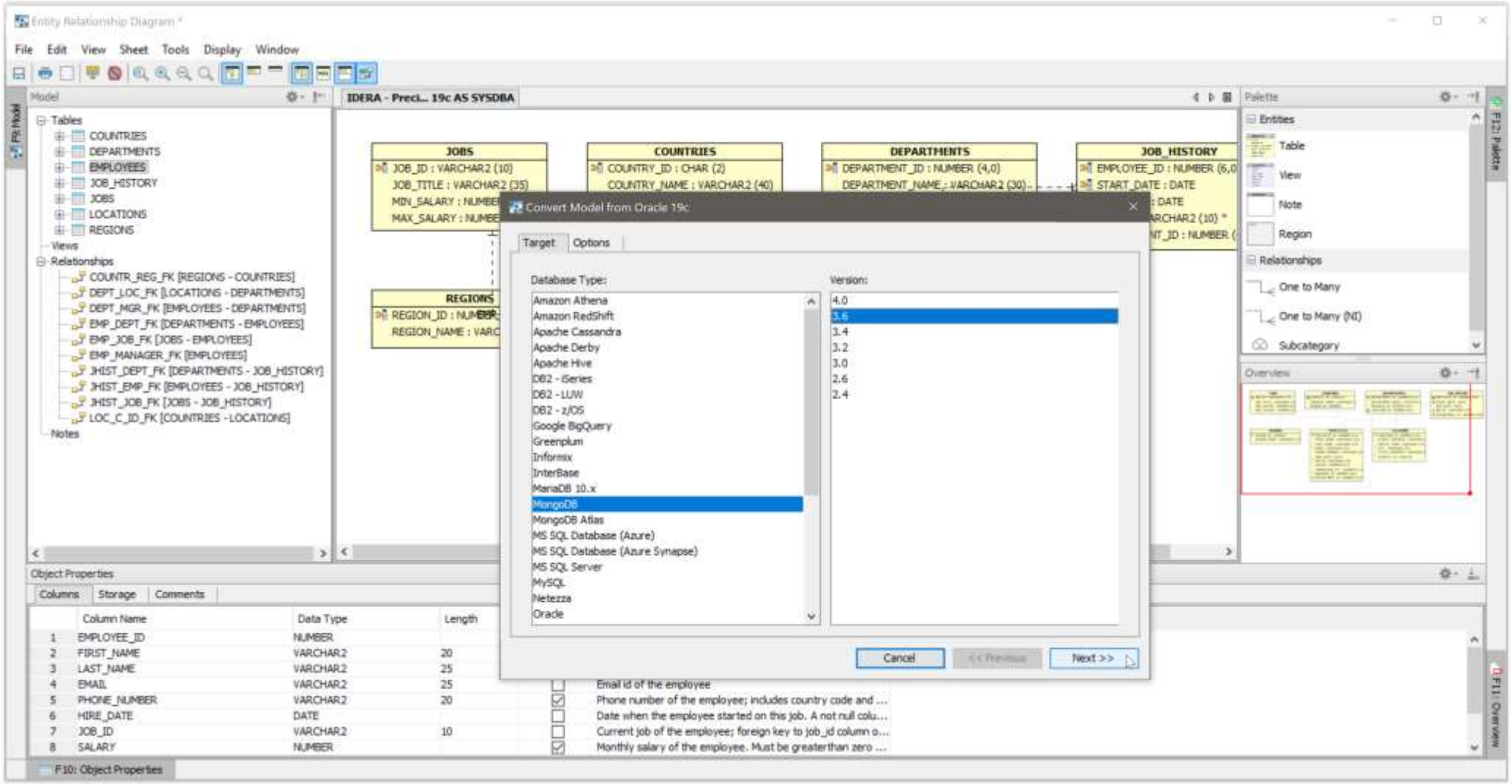
Konwersja modelu do innego formatu bazy



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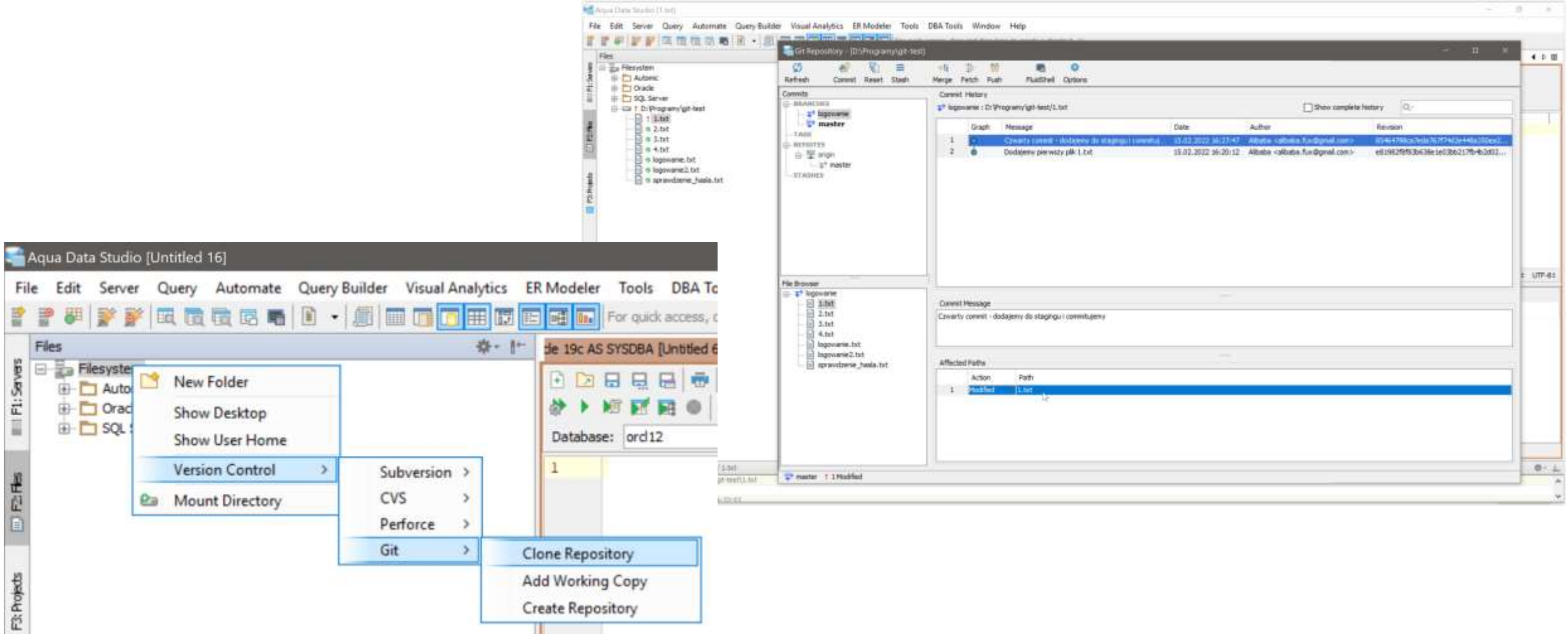
Wersjonowanie kodu (Team Coding)



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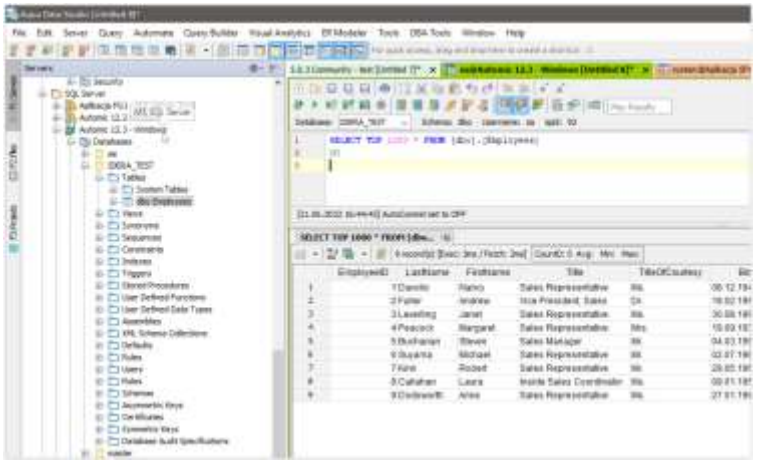
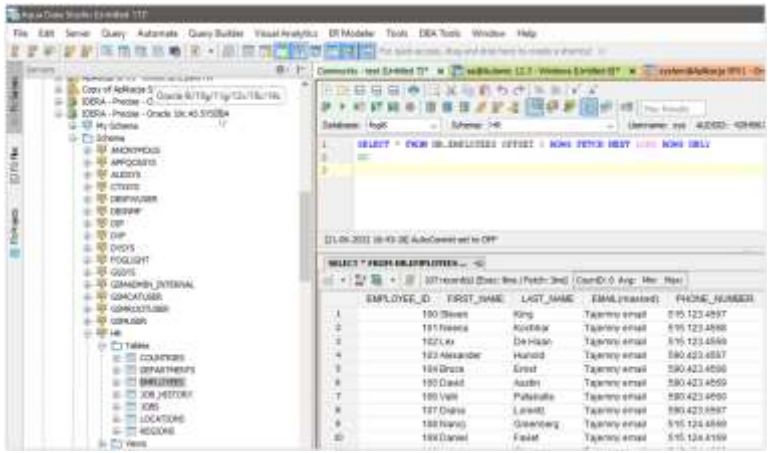
Unifikacja zarządzania różnymi bazami danych

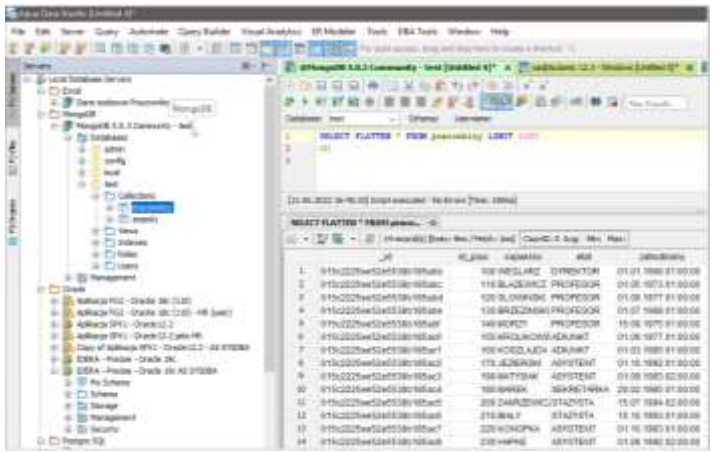
MS SQL Server



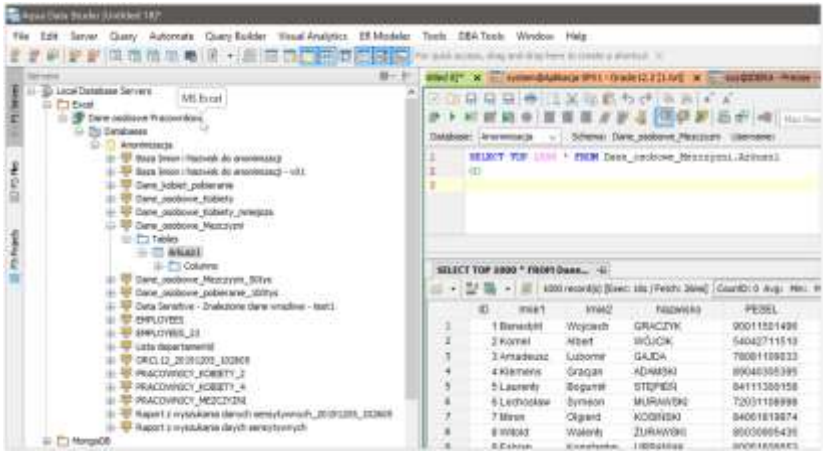
Oracle



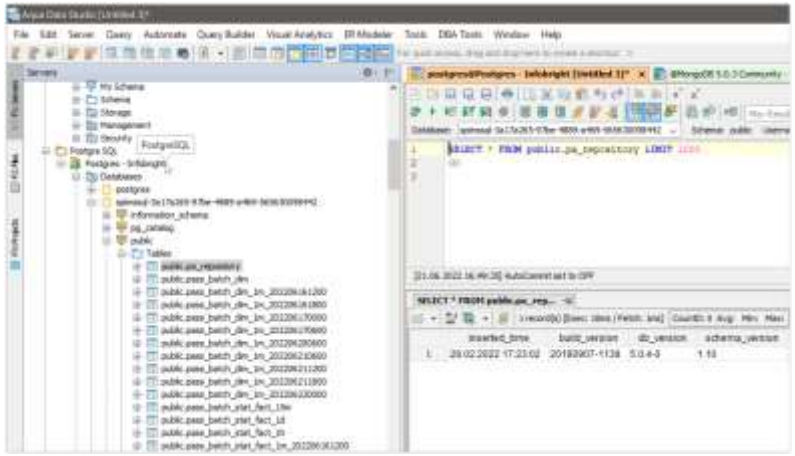
MongoDB



MS Excel



MySQL/MariaDB/PostgreSQL



Aqua Data Studio

AQUAFOLD

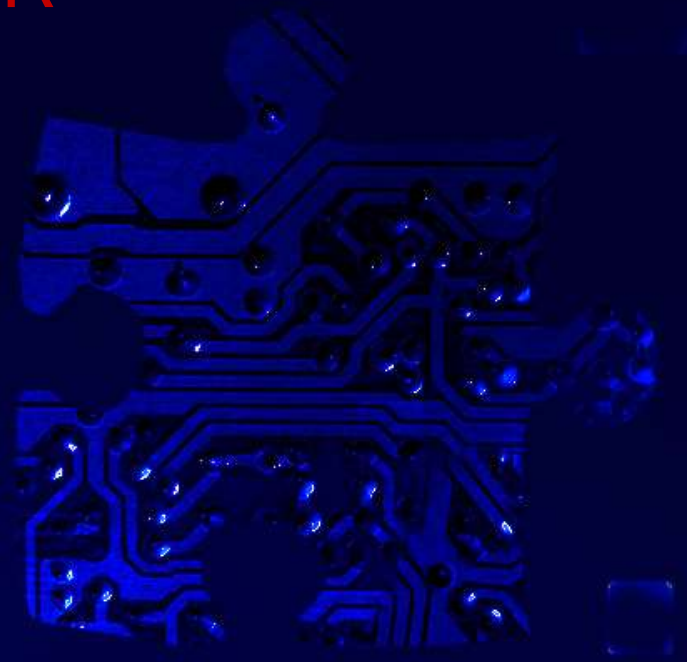
QDP

Dlaczego warto?

- Aqua Data Studio zapewnia szerokie możliwości poprawy produktywności dla programistów, analityków i administratorów baz danych, a w tym
  - Pracę z ponad 30 platformami baz danych
  - Tworzenie kodu SQL
  - Wizualizację danych
  - Administrowanie środowiskami baz danych
  - I wiele więcej…

Więcej informacji i wersja demo do pobrania na stronie: www.aquafold.com

Wybrane rozwiązania Idera:
SQL DIAGNOSTIC MANAGER

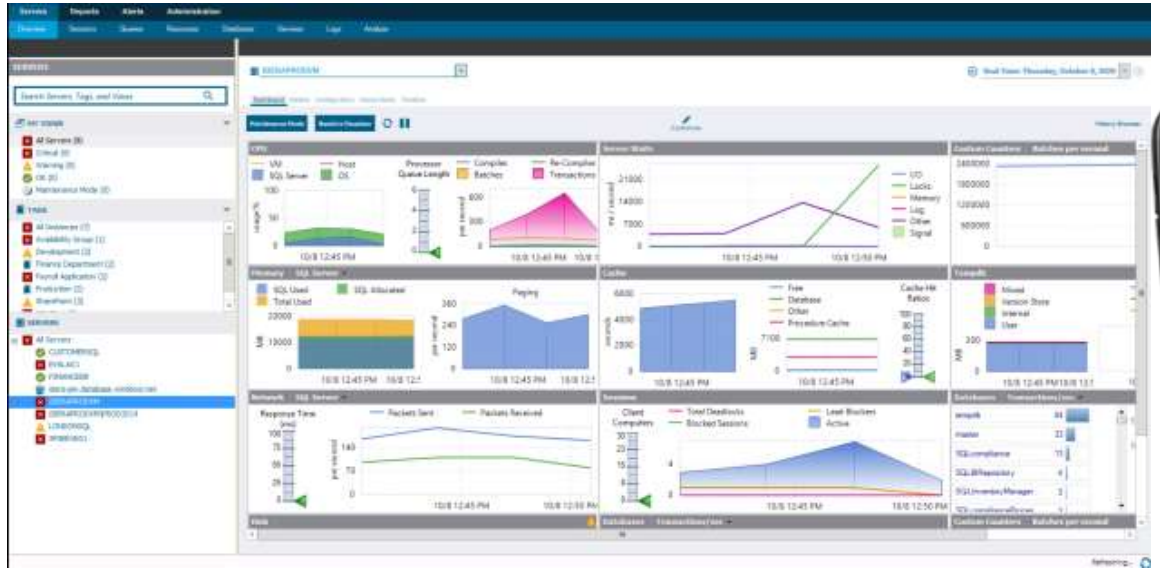


QDP Idera, Inc.

DATABASE MONITORING AND PERFORMANCE
SQL DIAGNOSTIC MANAGER

24x7 SQL Server Performance Monitoring, Alerting and Diagnostics

SQL Diagnostic Manager



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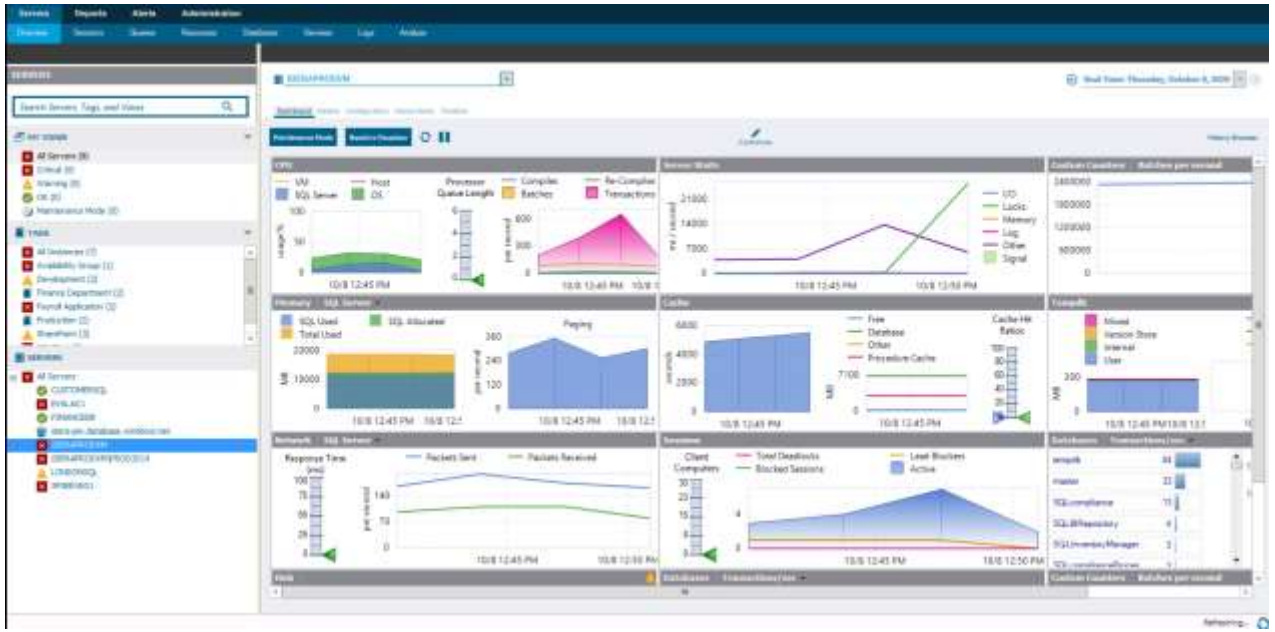
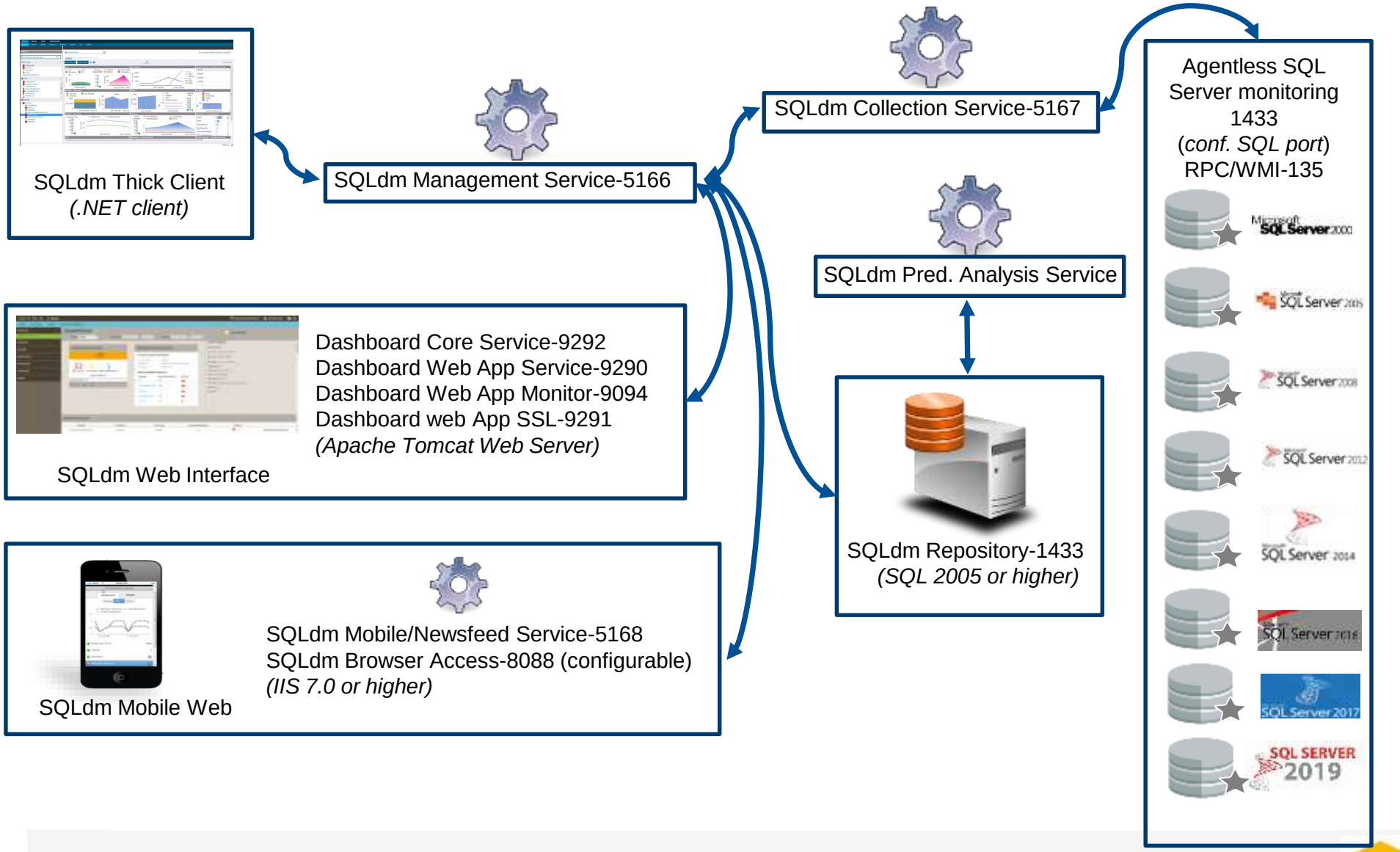
Funkcjonalność SQL Diagnostic Manager

- Monitorowanie, alarmowanie, analiza i raportowanie
- Przeglądanie wyników historycznych
- Wydajność w odniesieniu do wielu linii bazowych
- Realizacja czynności w odpowiedzi na alerty
- Szczegółowa analiza zapytań
- Analiza nakazowa i predykcyjna
- Obsługa Hyper-V/VMware, Azure, AWS
- Niestandardowe liczniki i pulpity nawigacyjne
- Raportowanie - analiza, trendy, planowanie wydajności, prognozy na przyszłość



Architektura SQL Diagnostic Manager



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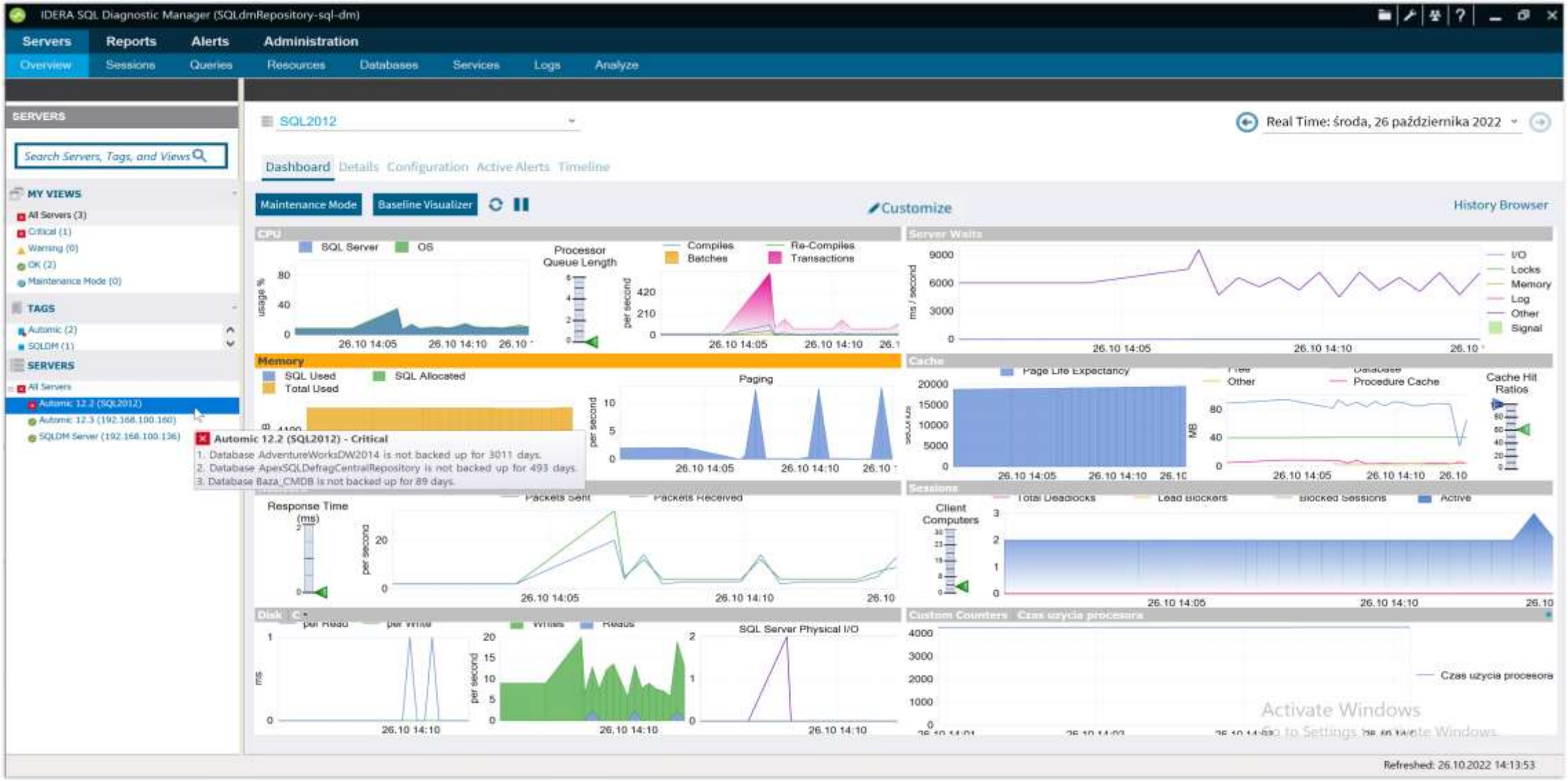
Idera SQLDM – Konsola diagnostyczna



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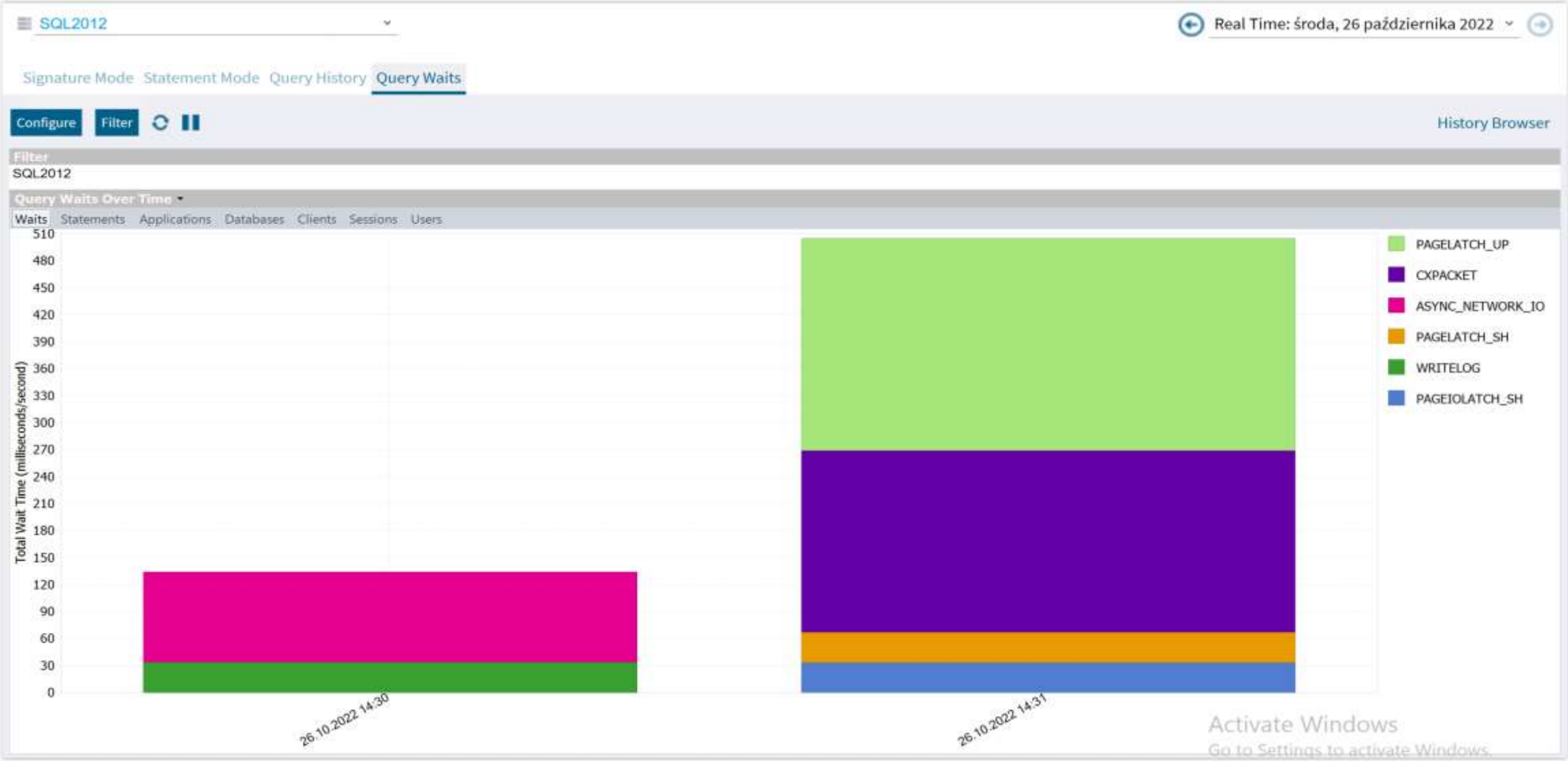
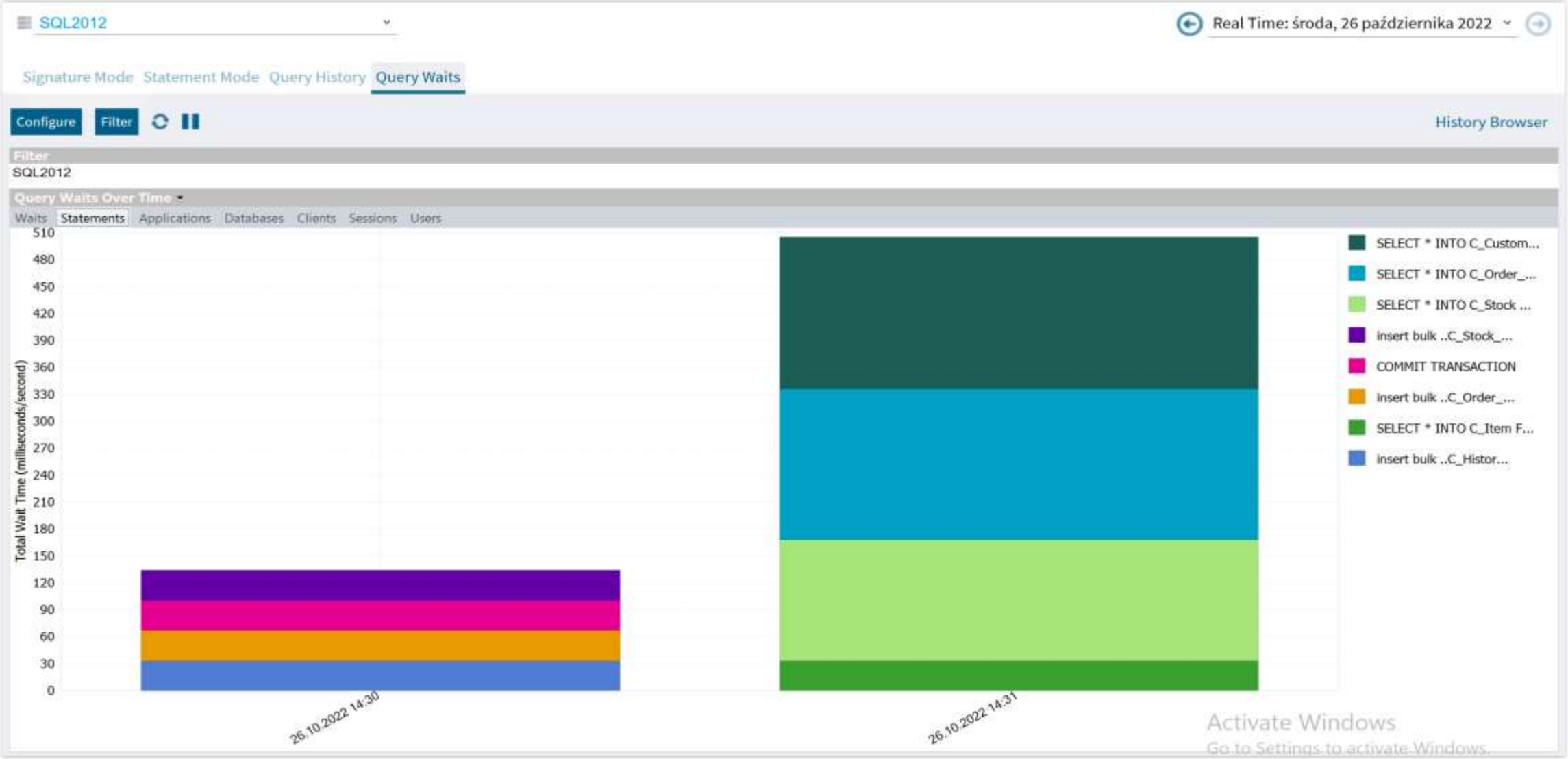
Idera SQLDM – **oczekujące zapytania**



IDERA

QDP

Idera SQLDM – **oczekujące zapytania**



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Idera SQLDM – **oczekujące zapytania**

IDERA SQL Diagnostic Manager (SQLdmRepository-sql-dm)

Servers | Reports | Alerts | Administration

Overview | Sessions | Queries | Resources | Databases | Services | Logs | Analyze

SERVERS

Search Servers, Tags, and Views

MY VIEWS
- All Servers (3)
- Critical (1)
- Warning (0)
- OK (2)
- Maintenance Mode (0)

TAGS
- Automic (2)
- SQLDM (1)

SERVERS
- All Servers
- Automic 12.2 (SQL2012)
- Automic 12.3 (192.168.100.160)
- SQLDM Server (192.168.100.136)

SQL2012

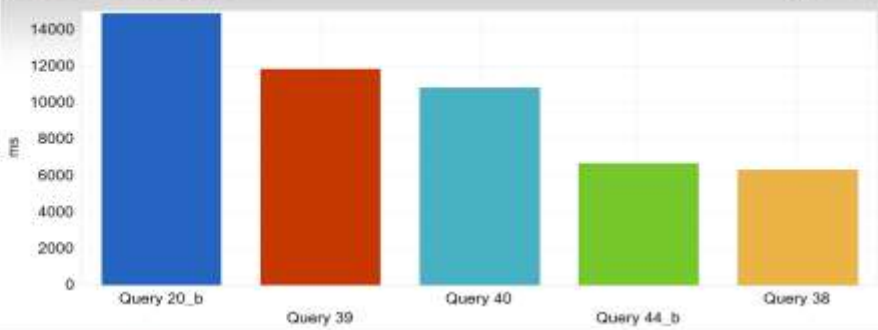
Real Time: czwartek, 27 października 2022

Signature Mode | Statement Mode | Query History | Query Waits

Configure Query Monitor | Filter | Show/Hide | History Browser

Date Range - ... 27.10.2(End: 27.10.2(Time Period - Be... 00:00:0(End: 23:59:5(
Applicati... Us... Exclude SQ... Show SQL Statements
Database: Cli... Include SQL... Show Stored Procedures
Show SQL Batches
Exclude Currently Running Queries

Average Duration - by SQL Text — Top 5



Average CPU - by Database — Top 5

Event Occurrences (23) — Show 200

Details	Query	Event Type	CPU Time (ms)	Reads	Writes	SQL Text	Applicat	Avg. Duration	Databas	Avg. CPU Time (ms)	Avg. Writes	Avg. I\O per sec	Avg. Wait Time	Avg. CPU
	Query 23_b	SQL Batch	5 869	172 560	16	SELECT n_name N	Benchm	3 427	master	4 819	5	49,92	2 068	
	Query 21_b	SQL Batch	5 078	130 690	0	SELECT c_name,c_	Benchm	3 598	master	4 874	0	36,32	2 898	
	Query 43	SQL Batch	2 375	36 206	4 278	create index H_or	Benchm	2 392	master	2 375	4 278	16,92		
	Query 22_b	SQL Batch	6 043	419 390	6	SELECT s_name, c	Benchm	5 371	master	5 027	2	77,81	1 999	
	Query 39	SQL Batch	10 516	182 260	16 376	create index H_lin	Benchm	11 824	master	10 516	16 376	16,80		
	Query 20_b	SQL Batch		194 050	20 151	create index H_lin	Benchm	14 883	master	13 234	20 151	14,39		
	Query 41	SQL Batch		184 597	17 104	create index H_lin	Benchm	5 678	master	4 641	17 104	35,52		
	Query 48	SQL Batch		130 443	0	SELECT s_suppkey	Benchm	2 397	master	906	0	54,42		
	Query 38	SQL Statemen		329 457	130 427	SELECT * INTO H_	Benchm	6 283	master	5 719	130 427	73,19	1 302	

- Show Query Text
- Show Query History
- Keep Detailed History
- Collapse All Groups
- Expand All Groups
- Print
- Export To Excel

Filter Applied 23 Queries

Refreshed: 27.10.2022 11:26:07

IDERA

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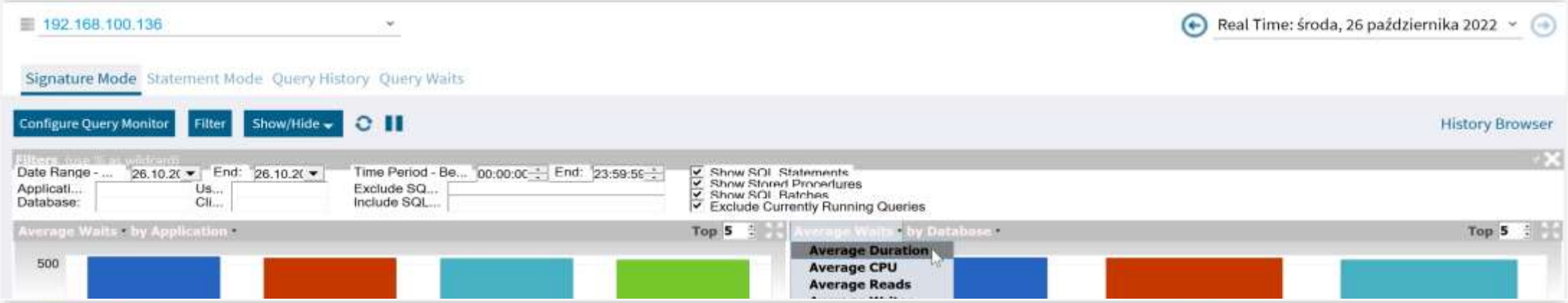
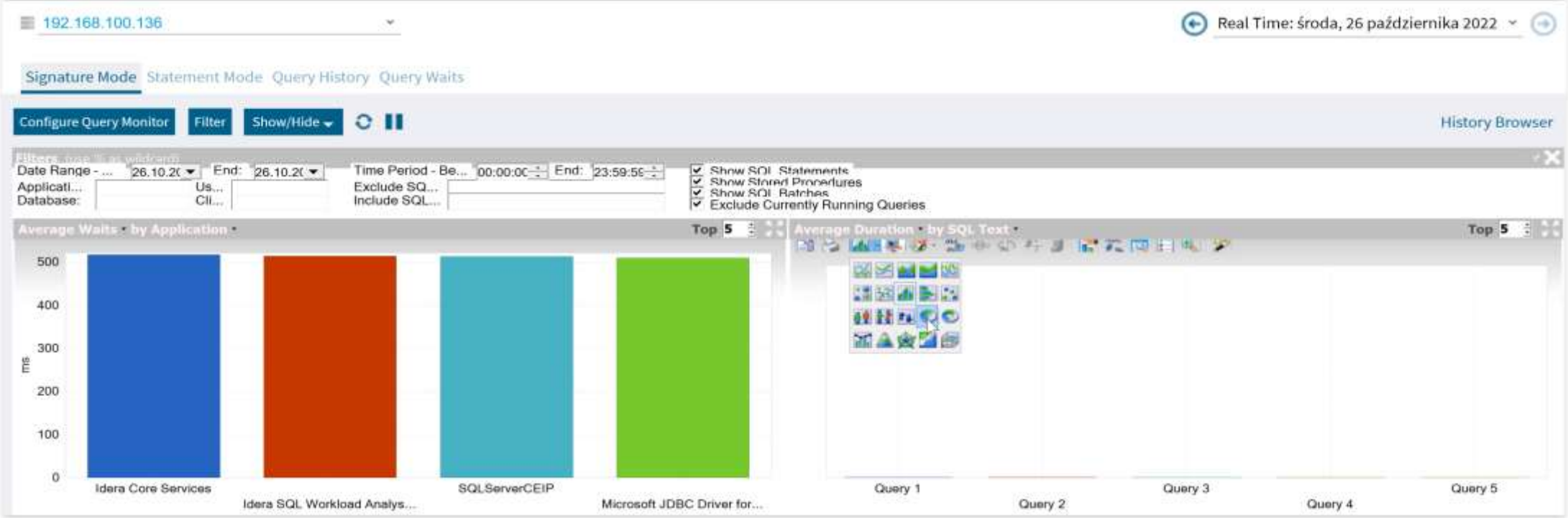
Idera SQLDM – **oczekujące zapytania**





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Idera SQLDM – **Stan środowiska w czasie**

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Idera SQLDM – Alerty oraz sugestie

IDERA SQL Diagnostic Manager (SQLdmRepository-sql-dm)

Servers | Reports | Alerts | Administration

ALERTS

Current View
- Active
- By Severity
- By Server
- By Metric
- SQL Agent Job Failures
- Blocked Sessions
- Oldest Open Transactions
- Query Monitor Events

Hide Filter Options
Hide Details
Alert Configuration Templates...
Alert Actions and Responses...

Alerts — Active Alerts

Tag: All
Server: All
Metric: All

Show active alerts
Show all alerts for the time span
From: 23.10.20 00:0

!	Change	Time	Instance	Server Type	Summary	FriendlyServerName
	Remai	26.10.202	SQL2012	Windows	OS memory used is 91.47%	Automic 12.2
	Raise	26.10.202	SQL2012	Windows	OS paging is 121.59 pages/second	Automic 12.2
	Lower	26.10.202	SQL2012	Windows	Page life expectancy for SQL2012 is currently 1715.	Automic 12.2
	Raise	22.10.202	SQL2012	Windows	Database ApexSQLDefragCentralRepository is not backed up for 49	Automic 12.2
	Raise	22.10.202	SQL2012	Windows	Database Baza_CMDB is not backed up for 89 days.	Automic 12.2
	Raise	22.10.202	SQL2012	Windows	Database model is not backed up for 7137 days.	Automic 12.2
	Raise	22.10.202	SQL2012	Windows	Database ccc is not backed up for 493 days.	Automic 12.2
	Raise	22.10.202	SQL2012	Windows	Database polkomtel_awa122 is not backed up for 1248 days.	Automic 12.2
	Raise	22.10.202	SQL2012	Windows	Database SpotlightStatisticsRepository is not backed up for 816 day	Automic 12.2
	Raise	22.10.202	SQL2012	Windows	Database SpotlightPlaybackDatabase is not backed up for 940 days	Automic 12.2
	Raise	22.10.202	SQL2012	Windows	Database msdb is not backed up for 3165 days.	Automic 12.2
	Raise	22.10.202	SQL2012	Windows	Database master is not backed up for 7137 days.	Automic 12.2
	Raise	22.10.202	SQL2012	Windows	Database AdventureWorksDW2014 is not backed up for 3011 days.	Automic 12.2
	Raise	22.10.202	SQL2012	Windows	Database Northwind is not backed up for 768 days.	Automic 12.2
	Raise	22.10.202	SQL2012	Windows	Database SharePlex is not backed up for 1307 days.	Automic 12.2
	Raise	22.10.202	SQL2012	Windows	Database IDERADashboardRepository is not backed up for 24 days.	Automic 12.2
	Raise	22.10.202	SQL2012	Windows	Database SQLWARepo is not backed up for 24 days.	Automic 12.2
	Raise	22.10.202	SQL2012	Windows	Database SQLqtDatabase is not backed up for 24 days.	Automic 12.2
	Raise	22.10.202	SQL2012	Windows	Database SQLdmRepository is not backed up for 24 days.	Automic 12.2

Details

Severi... Warning — Time: 26.10.2022 — Server ... Windows
Change: Raised to — Metric: OS Paging
Server: SQL2012 — Datab...
Summ... OS paging is 121.59 pages/second

Show Real Time View
Show Historical View
Show Alert Help

SQL Server instance SQL2012 - The operating system is paging at 121.59 pages/second.

IDERA

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Idera SQLDM – Alerty i linie bazowe - **definiowanie zakresów**

IDERA SQL Diagnostic Manager (SQLdmRepository-sql-dm)

Servers | Reports | Alerts | Administration

Overview | Sessions | Queries | Resources | Databases | Services | Logs | Analyze

SERVERS

Search Servers, Tags, and Views

MY VIEWS
- All Servers (3)
- Critical (1)
- Warning (0)
- OK (2)
- Maintenance Mode (0)

TAGS
- Automic (2)
- SQLDM (1)

SERVERS
- All Servers
  - Automic 12.2 (SQL2012)
  - Automic 12.3 (192.168.100.160)
  - SQLDM Server (192.168.100.136)

SQL2012

Dashboard

Maintenance Mode

CPU

Memory

Network

Alert Configuration - SQL2012

Alert recommendations are available for this SQL Server. Click here to view the recommendations now.

Group by metric category

Enabled	Metric	Rank
✓	OS Disk Full	20
✓	OS Disk Tim	60
	OS Disk Tim	60
	OS Disk Tim	60
✓	OS Memory	20
	OS Memory	20
✓	OS Paging (P	60
	OS Paging (P	60
	OS Privilege	60
	OS Privilege	60
✓	OS Processo	20
	OS Processo	20
✓	OS Processo	20
	OS Processo	20
	OS User Tim	60
	OS User Tim	60
✓	Page Life Ex	60
	Page Life Ex	60
	Procedure C	20
	Procedure C	20
✓	SQL Server C	20
	SQL Server C	20
✓	SQL Server	20
	SQL Server	20
Category : Services (20 items)		
	Cluster Activ	10
✓	Cluster Failo	10
✓	Distribution	40
✓	DTC Service	10
✓	Full-Text Sea	50

Configuration | Comments

Metric: Page Life Expectancy

Category: Resources

Description: The number of seconds a page is expected to remain in SQL Server's buffer pool memory.

Rank: 60

3600 | 0 | 1600 | 50011

Baseline Statistics
Range: 4381,5 - 41676,5
Average: 23029
Maximum: 54232
Stdev: 18647,5
Count: 286

State	Start	End
OK	999999	3600
Infor		
Warn	3600	1600
Critic	1600	0

Advanced

Apply Template | Create Template | Configure Baseline... | OK | Apply | Cancel

IDERA

QDP

Idera SQLDM – Analiza problemu

IDERA SQL Diagnostic Manager (SQLdmRepository-sql-dm)

Servers | Reports | Alerts | Administration

Overview | Sessions | Queries | Resources | Databases | Services | Logs | Analyze

SERVERS

Search Servers, Tags, and Views

MY VIEWS
- All Servers (3)
- Critical (1)
- Warning (0)
- OK (2)
- Maintenance Mode (0)

TAGS
- Automic (2)
- SQLDM (1)

SERVERS
- All Servers
  - Automic 12.2 (SQL2012)
  - Automic 12.3 (192.168.100.160)
  - SQLDM Server (192.168.100.136)

192.168.100.160

24.10.2022 (12:54) to 24.10.2022 (12:54)

Block | Export | Copy | Email | Undo | Run | Show Problem | Undo Script | Optimize Script | Back

History Browser

Finding Text	Priority
An unfiltered delete on [tempdb.NewQMExtendedEvents] in [ae]	
An unfiltered delete on [MQ1JWP] in [ae]	
An unfiltered delete on [MQ1CP003] in [ae]	
An unfiltered delete on [tempdb.NewQMExtendedEvents] in [ae]	
An unfiltered delete on [tempdb.AMExtendedEvents] in [ae]	
An unfiltered delete on [tempdb.AMExtendedEvents] in [ae]	
An unfiltered delete on [#AMReaderDataTable] in [ae]	
An unfiltered delete on [#TempQMReaderDataTable] in [ae]	
An unfiltered delete on [#QMReaderDataTable] in [ae]	
An unfiltered delete on [tempdb.AMExtendedEvents] in [ae]	
A Search predicate contains a column expression in a function	
A Search predicate contains a column expression in a function	
A Search predicate contains a column expression in a function	
A Search predicate contains a column expression in a function	
A Search predicate contains a column expression in a function	
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A Search predicate contains a column expression in a function	
A Search predicate contains a column expression in a function	
A Search predicate contains a column expression in a function	
A Search predicate contains a column expression in a function	

Sql Viewer

```
DELETE TOP (1) FROM MQ1CP003 WITH(READPAST) OUTPUT deleted.MQCF_PK,dele
```

Copy | Close

Ln 1 Col 27

An unfiltered delete on [MQ1CP003] in [ae]

The query deletes all data from table [MQ1CP003].

When is this not a problem?

SDR-Q11 Unfiltered delete statement

Activate Windows
Go to Settings to activate Windows.

IDERA

QDP

Idera SQLDM – poprawa **wydajności (szczegóły**, sugestie, skrypty)

IDERA SQL Diagnostic Manager (SQLdmRepository-sql-dm)

Servers | Reports | Alerts | Administration

Overview | Sessions | Queries | Resources | Databases | Services | Logs | Analyze

SERVERS

Search Servers, Tags, and Views

MY VIEWS
- All Servers (3)
- Critical (1)
- Warning (0)
- OK (2)
- Maintenance Mode (0)

TAGS
- Automic (2)
- SQLDM (1)

SERVERS
- All Servers
  - Automic 12.2 (SQL2012)
  - Automic 12.3 (192.168.100.160)
  - SQLDM Server (192.168.100.136)

SQL2012

24.10.2022 (13:01) to 24.10.2022 (13:01)

Block | Export | Copy | Email | Undo | Run | Show Problem | Undo Script | Optimize Script | Back | History Browser

Finding Text	Priority
The integrity of database [SQLdmRepo	
The integrity of database [SQLWARepo	
The integrity of database [IDERADashb	
The integrity of database [AdventureW	
Backups for database [AdventureWork	
The integrity of database [SpotlightPla	
The integrity of database [SpotlightSta	
The integrity of database [SharePlex] h	
The integrity of database [ccc] has not	
Backups for database [ccc] are on the s	
The integrity of database [Baza_CMDB]	
The integrity of database [SQLqtDatab	
The integrity of database [ApexSQLDef	
Backups for database [ApexSQLDefrag	
The integrity of database [Northwind]	
The integrity of database [polkomtel_a	
The integrity of database [Warsztaty] h	
The integrity of database [master] has	
The integrity of database [model] has	
The integrity of database [msdb] has n	
There is very large table (greater than	
Index [UQ__Alerts_M__1A76880552584	
Indexes on [SQLdmRepository].[dbo].[	
Indexes on [SQLdmRepository].[dbo].[	
Indexes on [SQLdmRepository].[dbo].[	
Indexes on [SQLdmRepository].[dbo].[	

Optimize Now

```
--  There is very large table (greater than or equal to 1 million rows)
--If the trace flag needs to be re-enabled as a startup option, it shou

DBCC TRACEON(2371, -1);
```

Copy | Run | Cancel

There is very large table (greater than or equal to 1 million rows) [dbo].[spotlight_perfdata] in database [SpotlightStatisticsRepository] and a high number of modifications have been made since the last time statistics were updated.

There is very large table (greater than or equal to 1 million rows) [dbo].[spotlight_perfdata] in database [SpotlightStatisticsRepository] and a high number of modifications have been made since the last time statistics were updated.

SDR-I24

Activate Windows
Go to Settings to activate Windows.

IDERA

QDP

Idera SQLDM – **własne liczniki wydajnościowe**

Custom Counters

Home

Add Edit Delete Test Link Import Export — Actions

Group By Box — Show/Hide

Enabled	Category	Name	Description	Counter Type	Object Name	Counter Name	Instance Name	Scale	SQL Script	Calculation Type	Alert Comparison
Yes	Custom	SQL Server _ Czas pracy		SQL Script	N/A	N/A	N/A	1	select datediff(mi, create_date,	Value	Less than or equal
Yes	Custom	Czas uzycia procesora	% Processor Time is the	Windows	Win32_PerfForma	PercentProcessor	Name="5"	1	N/A	Value	Greater than or equal

Edit Custom Counter

Provide Custom SQL Script
Provide a custom SQL script that returns a numerical value that you would like to monitor

Enter SQL Script

Please note that your SQL script must return a single numerical value in order to collect successfully.

```
select datediff(mi, create_date, getdate())
[Service Run Time (min)] from sys.databases where name = 'tempdb'
```

Edit Custom Counter

Select Windows System Counter
Select the Windows System Counter you would like to monitor

- Select a counter from an existing monitored SQL Server host **(Recommended)**
- Manually enter counter configuration

Select Counter

Object Name: Win32_PerfFormattedData_PerfOS_Processor

Counter Name: PercentProcessorTime

Instance Name: Name="5"

< Back | Next > | Cancel

Sessions

Total Deadlocks — Lead Blockers — Blocked Sessions — Active

Client Computers

30 23 15 8 0

4 2 0

23.10 00:00 23.10 12:00 24.10 00:00 24.10 12:00 25.10 00:00 25.10 12:00 26.10 00:00 26.10 12:

Custom Counters Multiple Counters Selected

4000 3000 2000 1000 0

Counters selected for display:
Czas uzycia procesora
SQL Server _ Czas pracy

SQL Server _ Czas pracy

Activate Windows
Go to Settings to activate Windows.

Refreshed: 26.10.2022 15:32:26

IDERA

QDP

Idera SQLDM – raporty

IDERA SQL Diagnostic Manager (SQLdmRepository-sql-dm)

Servers | Reports | Alerts | Administration

Monitor | Analyze | Plan | Custom

Reports - Getting Started

Monitor | Analyze | Plan

Deploy Reports

Monitor. Analyze. Plan.

SQL Diagnostic Manager Reports help you monitor the SQL Servers in your organization, analyze vital objects and trends, and plan for the future.

Servers

Top Servers
Identify your worst performing SQL Servers

Server Statistics
Analyze and compare performance trends across two SQL Servers

Server Inventory
Find SQL Servers that share the same properties

Query Overview
Identify your worst performing queries

Top Queries
Find queries that are performing poorly or executing frequently

Alert History
Analyze the alert history for your SQL Servers

Baseline Statistics
Analyze and compare performance baselines across two SQL Server instances

Query Wait Statistics
Analyze the wait statistics for a server.

Server Uptime
Analyze Uptime Information

Databases

Top Databases
Identify your worst performing databases

Database Statistics
Analyze and compare performance trends across two databases

Top Database Applications
Analyze and compare performance trends across two databases

Mirroring History
Analyze the event history for a mirrored database

Top Tables by Growth
Identify the fastest growing tables

Top Tables by Fragmentation
Identify the most fragmented tables

Tempdb Statistics
Analyze the performance and space utilization of tempdb over time

Transaction Log Statistics
Analyze the database transaction log

Availability Group Statistics
View the historical health of your availability groups, availability replicas, and availability databases

Resources

Session Statistics
Track key session and network performance metrics over time

Detailed Session Report
Analyze Detailed Session Information across database

CPU Statistics
Track key CPU performance metrics

Disk Details
List key disk metrics for a server

Disk Statistics
Track key disk performance metrics

Replication Statistics
Track key replication performance metrics

Memory Statistics
Track key memory performance metrics

Disk Space Usage
Analyze the Disk Space Usage for the disks on a server

Disk Space History
Analyze the Disk Space history for the disks on a server

Idera SQLDM – raporty

IDERA SQL Diagnostic Manager (SQLdmRepository-sql-dm)

Servers | Reports | Alerts | Administration

Monitor | Analyze | Plan | Custom

Reports - Top Databases

Back | Reset Filters | Hide Filters

Server: 192.168.100.160
Period: Last 7 Days
Range: 19.10.2022 - 26.10.2022
Database Name:
use % as wildcard

Number of Databases: 5
Min Transactions/sec: 0
Min. Bytes Written/sec: 0
Include System Databases

Min. Data Size (MB): 0
Min Growth %: 0
Min. Bytes Read/sec: 0
Wait Threshold(ms): 0

Run Report

1 of 1 100% Find Next

Server Name:	192.168.100.160	**Date Range:**	19.10.2022 to 26.10.2022
Database:	No database filter specified	**Number of Databases:**	5

Top Databases By Data Size

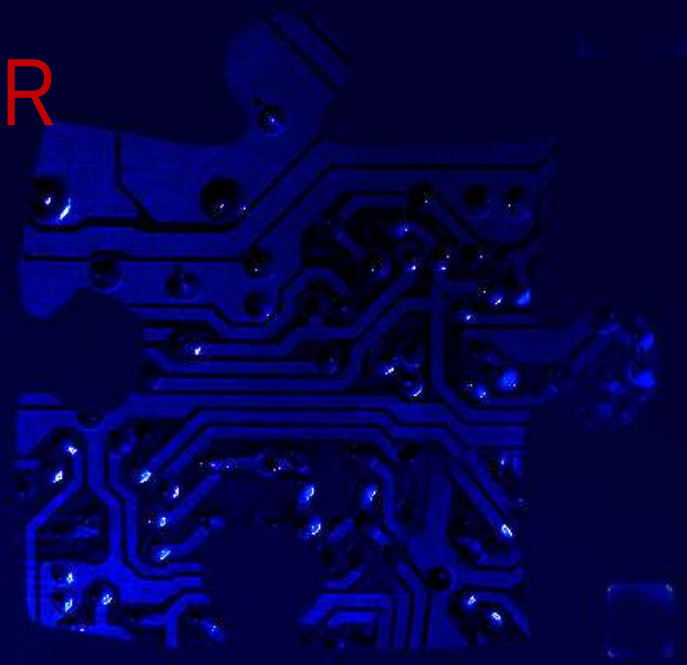
Database Name	Data File Size	Log File Size	Data Size	% Growth	Bytes Read/sec	Bytes Written/sec	Transactions/sec
ae	840,00	391,99	504,05	8,20%	4,57	3,72	3,23
IDERA_TEST	508,00	284,80	338,23	32 948,85 %	4,17	38,67	1,76
master	492,06	42,24	335,98	22 068,04 %	0,09	19,43	0,82
msdb	19,69	19,62	7,62	0,31%	0,17	0,00	0,04
tempdb	64,00	71,99	1,85	-7,78%	0,11	14,51	15,59

Top Databases By Data Growth

Database Name	Data File Size	Log File Size	Data Size	% Growth	Bytes Read/sec	Bytes Written/sec	Transactions/sec
IDERA_TEST	508,00	284,80	338,23	32 948,85 %	4,17	38,67	1,76
master	492,06	42,24	335,98	22 068,04 %	0,09	19,43	0,82
ae	840,00	391,99	504,05	8,20%	4,57	3,72	3,23

Activate Windows
Go to Settings to activate Windows.

Wybrane rozwiązania Idera:
MODUŁY DODATKOWE
SQL DIAGNOSTIC MANAGER



QDP Idera, Inc.

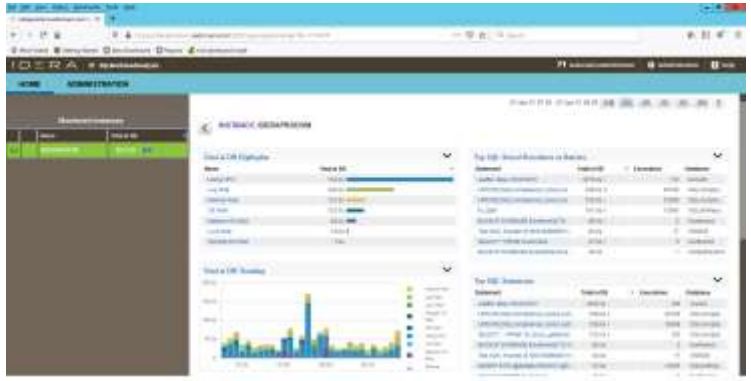
Moduły dodatkowe – SQL DM PRO

SQLDM Pro web interface instrukcja instalacji:
https://community.idera.com/database-tools/blog/b/community_blog/posts/installing-the-sqldm-cwf-dashboard-during-a-trial

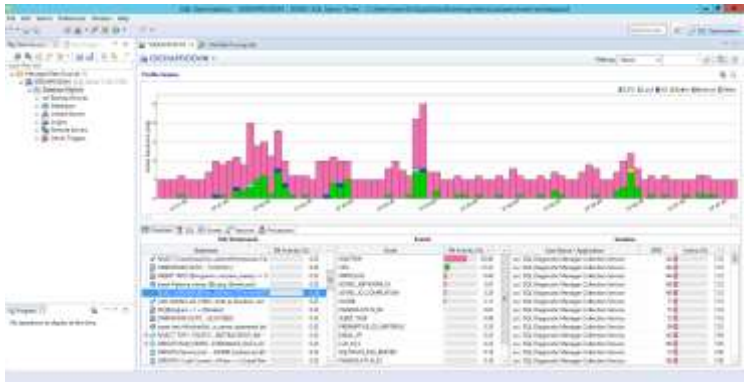
SQLDM Pro SQL Workload analysis oraz SQL Query tuner **odnośnik do pobrania**:
https://www.idera.com/productssolutions/sqlserver/sqldiagnosticmanager-addons/freetrialsubscriptionform/thankyouconfirmation

SQLDM Pro web interface

SQL Workload Analysis



SQL Query Tuner



Idera Dashboard – różne narzędzia na wspólnym pulpicie

IDERA ≡ DASHBOARD | sql-dm\administrator | Administration | Help

Overview | Details View | Alerts 17 | Administration

OVERVIEW FILTERS: Clear filters Export

Overall Status | SQLDM (SQDM1)

Total Alerts: 17
13 Critical Alerts
4 Warning Alerts
0 Informational Alerts
As of: 10/26/2022 10:42 am

Instance Status | SQLDM (SQDM1)

Total Monitored Instances: 3
2 Critical
0 Warning
0 Informational
1 Ok
0 Disabled

SQLDM – Active Alerts List (SQDM1)

!	Time	Summary	Instance	Category
	10/22/22 6:00...	Database Ap...	Automic 12.2	Backup
	10/22/22 6:00...	Database Baz...	Automic 12.2	Backup
	10/22/22 6:00...	Database mo...	Automic 12.2	Backup
	10/22/22 6:00...	Database ccc ...	Automic 12.2	Backup
	10/22/22 6:00...	Database pol...	Automic 12.2	Backup
	10/22/22 6:00...	Database Sp...	Automic 12.2	Backup
	10/22/22 6:00	Database Sp	Automic 12.2	Backup

SQLDM – Instances List (SQDM1)

!	Instance	Version	Status	Agent Status	Availa
	Automic 12.2	12.0.4100.1	Running	Running	841.6
	Automic 12.3	15.0.2095.3	Running	Running	977.61
	SQLDM Server	14.0.2042.3	Running	Running	2859.0

Idera Dashboard – różne narzędzia na wspólnym pulpicie

IDERA ≡ DASHBOARD | sql-dm\administrator | Administration | Help

Overview | Details View | Alerts 17 | Administration

INSTANCE DETAILS

SQL2012

Export

Products By Alerts | All Products

SQLdm(sqdm1)	0 alerts
SQLWorkloadAnalysis(sqlwa1)	0 alerts

SQLDM – Alert Counts by Category (SQDM1)

Category	Count
Backup	16
Custom	1
Resources	1
Services	0
Sessions	0
Virtualization	0

SQLDM – Top Instances by Alert Count (SQDM1)

Instance	Alerts
Automic 12.2	17
SQLDM Server	1

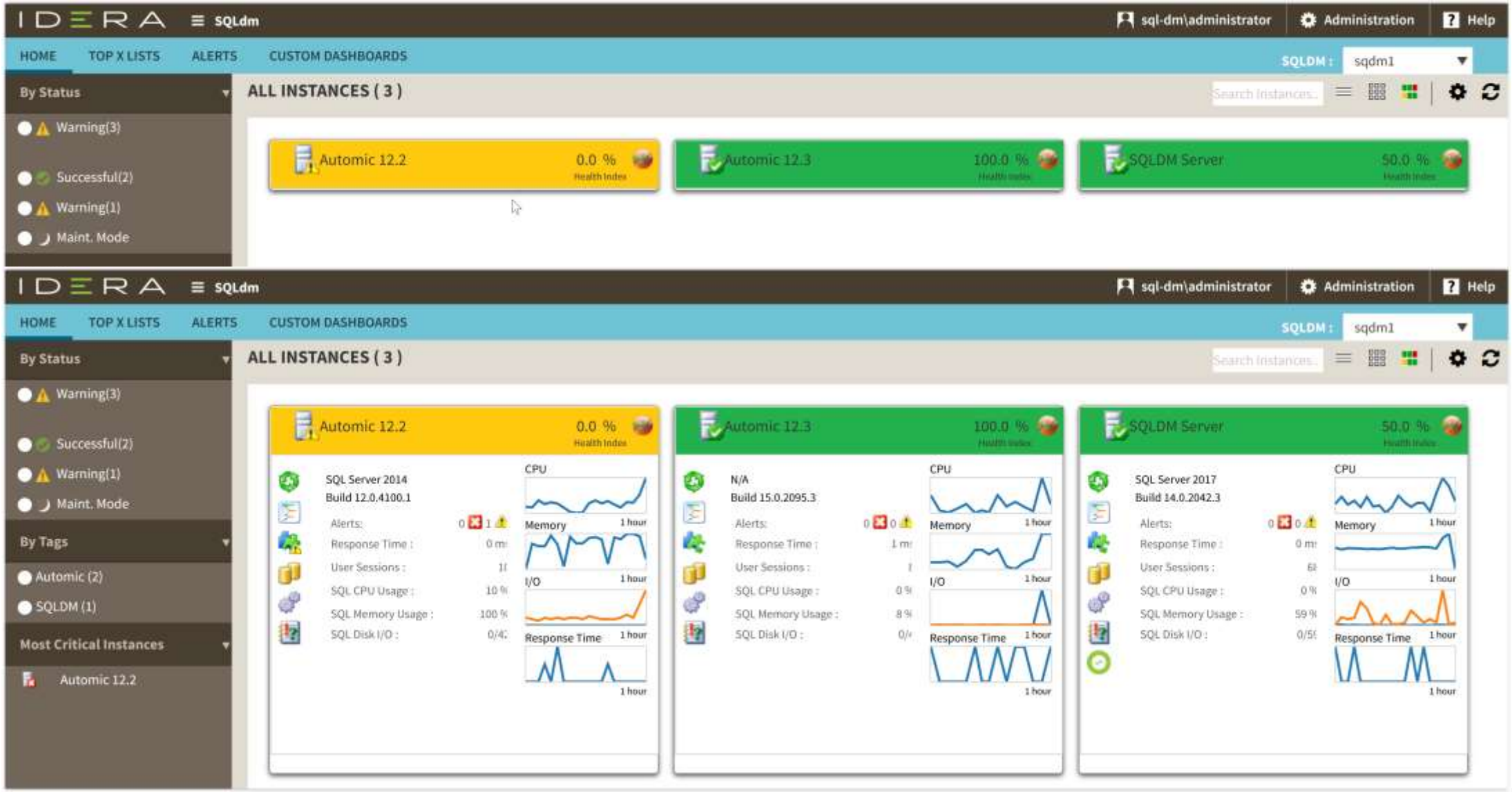
SQLDM – Top Instances by CPU Usage (SQDM1)

Instance	CPU Usage	(%)
Automic 12.2	8.31	
SQLDM Server	0.42	
Automic 12.3	0.32	

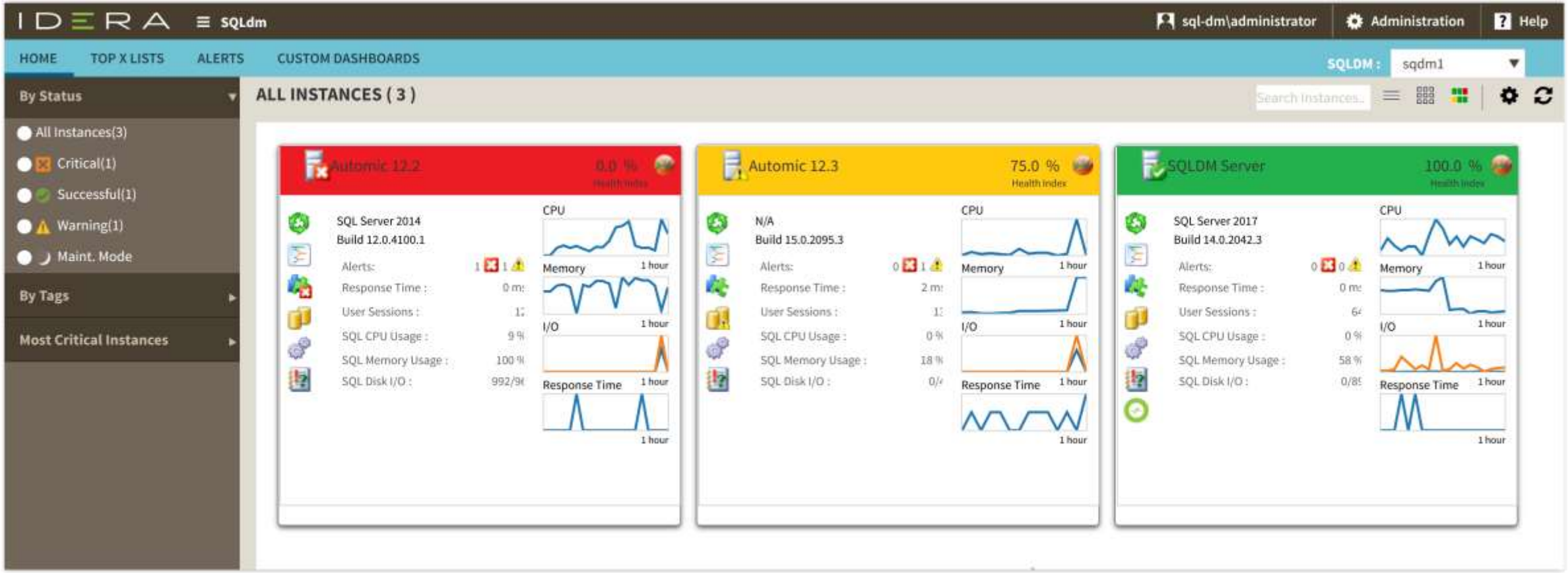
SQLDM – Top Databases by Alert Counts (SQDM1)

Instance	Database	Alerts
Automic 12.2	AdventureWorksDW...	1
Automic 12.2	ApexSQLDefragCent...	1
Automic 12.2	Baza_CMDB	1
Automic 12.2	ccc	1
Automic 12.2	IDERADashboardRe...	1
Automic 12.2	master	1
Automic 12.2	model	1
Automic 12.2	msdb	1
Automic 12.2	Northwind	1
Automic 12.2	polkomtel_awa122	1

Idera Dashboard – **różne narzędzia na wspólnym pulpicie**



Idera Dashboard – **różne narzędzia na wspólnym pulpicie**



Idera Dashboard – różne narzędzia na wspólnym pulpicie

IDERA ≡ SQLdm | sql-dm\administrator | Administration | Help

HOME | TOP X LISTS | ALERTS | CUSTOM DASHBOARDS | SQLDM : sqdm1

TOP SERVERS BY ALERTS

Instance	Alerts
Automic 12.2	18

TOP SERVERS BY CPU USAGE

Instance	CPU Usage (%)
Automic 12.2	9.17
SQLDM Server	0.20
Automic 12.3	0.19

TOP SERVERS BY MEMORY USAGE

Instance	Allocated (KB)	Usage (KB)
SQLDM Server	5,879.00	3464.0
Automic 12.3	6,325.00	1107.0
Automic 12.2	530.00	530.0

TOP SERVERS BY RESPONSE TIME

Instance	Response Time (ms)
Automic 12.3	1
SQLDM Server	0
Automic 12.2	0

TOP SERVERS BY WAITS

Instance	Waits
Automic 12.3	240,055.00
SQLDM Server	180,042.00
Automic 12.2	180,003.00
Automic 12.3	2,768.00
SQLDM Server	100.00

TOP SERVERS BY QUERIES

Instance	Queries (ms)
Automic 12.2	45
SQLDM Server	2

TOP SERVERS BY I/O

Instance	Physical I/O (per sec)
SQLDM Server	1.28
Automic 12.2	0.47
Automic 12.3	0.27

TOP SERVERS BY SESSIONS

Instance	Sessions
SQLDM Server	101
Automic 12.3	69
Automic 12.2	45

TOP SERVERS BY BLOCKED SESSIONS

Instance	Blocked Sessions
SQLDM Server	0
Automic 12.2	0
Automic 12.3	0

TOP SERVERS BY ACTIVE CONNECTIONS

TOP SERVERS BY DISK SPACE UTILIZATION

TOP SERVERS BY TEMPDB UTILIZATION

Idera Dashboard – **moduł** Workload Analysis (add-on)

IDERA ≡ SQLWorkloadAnalysis | sql-dm\administrator | Administration | Help

HOME | ADMINISTRATION

26-Oct-22 15:00 - 26-Oct-22 15:59 15M 1H 4H 1D 5D 4W ?

Monitored Instances

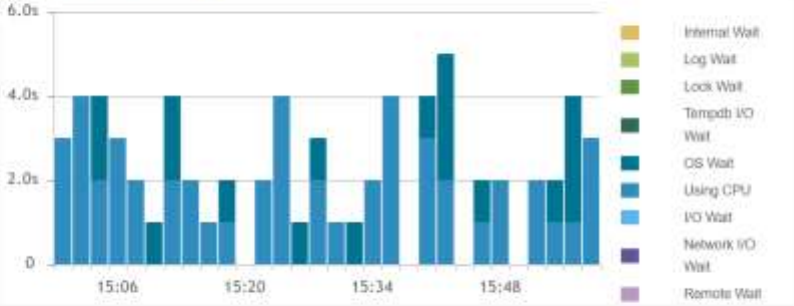
	Name	Total in DB
	192.168.100.136	3662.0s

INSTANCE: 192.168.100.136

Total in DB Highlights

Name	Total in DB
Using CPU	50.0s
OS Wait	18.0s

Total in DB Trending



Top Databases

Database	Total in DB
master	3635.0s
SQLdmRepository	18.0s

Top SQL Stored Procedures or Batches

Statement	Total in DB	Executions	Database
waitfor delay '00:00:00.5'	3600.0s	117	master
p_GetMonitoredSqlServerStatus	9.0s	5	SQLdmRep...
SELECT type, data FROM sys.fn...	5.0s	9	master
/* SQL Diagnostic Manager v12.0....	4.0s	4	msdb
/* SQL Diagnostic Manager v12.0....	4.0s	2	master
SET @pseudoclass = @class -- ...	3.0s	498	master
p_GetServerActivity	2.0s	9	SQLdmRep...
p_GetQueryMonitorStatements	2.0s	1	SQLdmRep...

Top SQL Statements

Statement	Total in DB	Executions	Database
waitfor delay '00:00:00.5'	3593.0s	117	master
SELECT ... FROM sys.fn_MSxe_re...	5.0s	9	master
insert into #ActiveWaits select wt.s...	4.0s	0	master
insert into #IntermediateTempTable...	3.0s	5	SQLdmRe...
with ActiveWaitsGrouped(wait_dur...	3.0s	3	master
with opentran as (select spid as se...	2.0s	2	master

Idera Dashboard – Workload Analysis – szukanie winnego

IDERA ≡ SQLWorkloadAnalysis | sql-dm\administrator | Administration | Help

HOME | ADMINISTRATION

USERS | Top Machines

Machine	Total in DB	Executions
sql-dm	3655.0s	469

26-Oct-22 15:03 - 26-Oct-22 16:03 | 15M | 1H | 4H | 1D | 5D | 4W | ?

INSTANCE: 192.168.100.136 > STATEMENT: SELECT ... FROM sys... > Login: SQLDM > Machine: sql-dm

Summary

Avg. Time:
Executions:
Total in DB:
Procedure/Batch :
Physical Reads:
Logical reads:
Recompiles:

Findings and Next Steps

Rank	Finding or Action
	Currently no execution plan available

View Execution Plan

SQL STATEMENT FULL TEXT

```
insert
into #ActiveWaits
select wt.session_id,
   case
      when @Elapsed > isnull(wait_duration_ms,0) then
           @Elapsed
      else wait_duration_ms
   end, wt.wait_type, host_name, program_name, login_name,
     statement_txt =
   case
```

Total in DB Trending

Top Accessed Objects

Object	Total in DB	Database
No Top Access Objects available		

https://sql-dm:9291/gui/sqlwa1/redirector/3/cwf?urlPath=http://SQL-DM:20700&rootContext=/gui#

Idera Dashboard – Workload Analysis – szukanie winnego

IDERA ≡ SQLWorkloadAnalysis | sql-dm\administrator | Administration | Help

HOME | ADMINISTRATION

INSTANCES | Top SQL Statements

Statement	Total in DB	Executions	Database
waitfor delay '00:00:00.5'	3596.0s	119	master
SELECT ... FROM sys.fn_MSxe_re...	5.0s	9	master
insert into #ActiveWaits select wt.s...	3.0s	0	master
with tranLocks as (select req			
Set @SQL = (SELECT top 50			
while (@cmd is not null)			
insert into @running_jobs se			
select ... from (select startdat			
ALTER EVENT SESSION [tele			
select ... from #qtemp where			
with ActiveWaitsGrouped(wa			
INSERT INTO @MinimumPer			
INSERT INTO @myperms SE			
ALTER EVENT SESSION [tele			
with opentran as (select spid			
xp_dirtree			
Select ... FROM sys.dm_exec_inpu...	1.0s	1	master
select ... from sys.databases wher...	1.0s	1	master
xp_enumerrorlogs	1.0s	1	master

```
insert
into #ActiveWaits
select wt.session_id,
   case
      when @Elapsed > isnull(wait_duration_ms,0) then
         @Elapsed
      else wait_duration_ms
   end, wt.wait_type, host_name, program_name, login_name,
     statement_txt =
   case
      when isnull(is_user_process,0) = 0 then null
      else (
         select substring(text, statement_start_offset/2
            + 1, (
            case
               when statement_end_offset < 1 then len(
                  convert(nvarchar(max),text)) * 2
               else statement_end_offset
            end - statement_start_offset)/2 + 1)
         from sys.dm_exec_sql_text(sql_handle)
      )
   end, database_id = r.database_id,
   case
      when @Elapsed > isnull(wait_duration_ms,0) then
         @PrevTicks
      else wait_started_ms_ticks
   end, task_bound_ms_ticks, statement_start_offset,
     statement_end_offset
from sys.dm_os_waiting_tasks wt left join
     sys.dm_os_workers w
```

26-Oct-22 15:07 - 26-Oct-22 16:06 | 15M | 1H | 4H | 1D | 5D | 4W | ?

INSTANCE: 192.168.100.136 > STATEMENT: insert into #Active...

Summary

Avg. Time:		Physical Reads:	0
Executions:	0	Logical reads:	0
Total in DB:	2463.0s	Recompiles:	0
Procedure/Batch :	-		

Findings and Next Steps

Rank	Finding or Action
!	**Heavy Operator Detected**

The operator is responsible for **99.12%** of the actual SQL statement execution time.

Operator: Table Insert
Object: #ActiveWaits

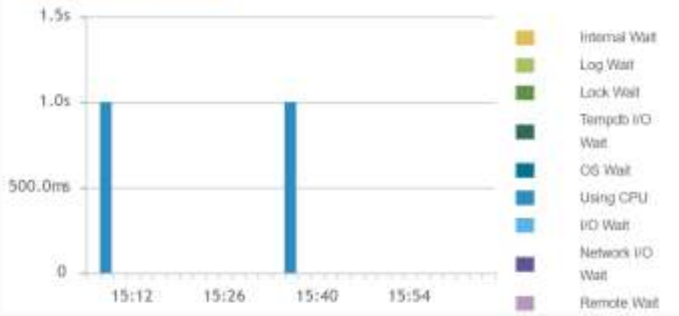
Examine Operator

View Execution Plan

SQL STATEMENT FULL TEXT

```
insert
into #ActiveWaits
select wt.session_id,
   case
```

Total in DB Trending



Top Accessed Objects

Object	Total in DB	Database
#ActiveWaits	2.0s	tempdb
FNGETSQL	0.0s	
SYSWAITS	0.0s	
SYSWORKERS	0.0s	
SYSSESSIONS	0.0s	
SYSREQUESTS	0.0s	

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Idera Dashboard – Workload Analysis – plan wykonania

IDERA ≡ SQLWorkloadAnalysis | sql-dm\administrator | Administration | Help

HOME | ADMINISTRATION

EXECUTION PLAN

Operator name	Object Name	Cost	CPU Cost	IO Cost	Returned Rows
Actual Execution Plan as of 2022-10-24 10:27...		14.937	0.10	14....	3,604.47
Table Insert	#ActiveWaits	14.806	0.00	14....	3,604.47
Table Spool - Eager Spool		0.015	0.00	0.01	3,604.47
Compute Scalar		0.000	0.00	0.00	3,604.47
Nested Loops - Left Outer Join		0.017	0.02	0.00	3,604.47
Hash Match - Right Outer Join		0.038	0.04	0.00	3,604.47
Table-valued function	SYSWORKERS	0.001	0.00	0.00	576
Hash Match - Inner Join		0.023	0.02	0.00	197.888
Merge Join - Inner Join		0.006	0.01	0.00	2.27303
Filter		0.000	0.00	0.00	5.90882
Compute Scalar		0.000	0.00	0.00	122
Table-valued function	SYSSESSIONS	0.000	0.00	0.00	122
Sort		0.012	0.00	0.01	46.9314
Filter		0.000	0.00	0.00	46.9314
Compute Scalar		0.000	0.00	0.00	97
Table-valued fu...	SYSREQUES...	0.000	0.00	0.00	97
Filter		0.009	0.01	0.00	961.602
Compute Scalar		0.000	0.00	0.00	1,000
Table-valued function	SYSWAITS	0.001	0.00	0.00	1,000
Assert		0.002	0.00	0.00	1
Stream Aggregate		0.004	0.00	0.00	1
Table-valued function	FNGETSQL	0.004	0.00	0.00	1

SQL STATEMENT FULL TEXT

```
insert
into #ActiveWaits
select wt.session_id,
   case
      when @Elapsed > isnull(wait_duration_ms,0) then @Elapsed
      else wait_duration_ms
   end, wt.wait_type, host_name, program_name, login_name, statement_txt =
   case
      when isnull(is_user_process,0) = 0 then null
      else (
         select substring(text, statement_start_offset/2 + 1, (
            case
               when statement_end_offset < 1 then len(convert(nvarchar(max),
                  text)) * 2
               else statement_end_offset
            end - statement_start_offset)/2 + 1)
         from sys.dm_exec_sql_text(sql_handle)
      )
   end, database_id = r.database_id,
   case
      when @Elapsed > isnull(wait_duration_ms,0) then @PrevTicks
      else wait_started_ms_ticks
   end, task_bound_ms_ticks, statement_start_offset, statement_end_offset
from sys.dm_os_waiting_tasks wt left join sys.dm_os_workers w
on wt.waiting_task_address = w.task_address left join sys.dm_exec_sessions s
on wt.session_id = s.session_id left join sys.dm_exec_requests r
on r.session_id = s.session_id
where wt.wait_type not in ('BAD_PAGE_PROCESS','BROKER_EVENTHANDLER',
      'BROKER_RECEIVE_WAITFOR','BROKER_TASK_STOP','BROKER_TO_FLUSH',
      'BROKER_TRANSMITTER','CHECKPOINT_QUEUE','CHKPT','CLR_SEMAPHORE',
```

Idera SQL Query Tuner

workspace - 192.168.100.155.oar - C:\Users\macie\AppData\Roaming\IDERA\sqlquerytuner\workspace - IDERA SQL Query Tuner

File Edit Search Preferences Window Help

Data Source ... | SQL Project ...

type filter text

Managed Data Sources (2)
- 192.168.100.140 (SQL Server)
- 192.168.100.155 (SQL Server 14.00.204.

192.168.100.155.oar | 192.168.100.155_2.oar | 192.168.100.155_3.oar

192.168.100.155

Filter by: None

Profile Session

CPU Lock IO Buffer Memory Other

Active Sessions (avg)

Overview | SQL | Events | Sessions | Procedures

SQL Statements

Statement	DB Ac...y (%)
waitfor delay '00:00:00.5'	50,46
select top 1 spid = ca...am_name), cmd = rtrim	6,64
insert into #ActiveWait...in_name, statement_txt	6,31
SELECT OH_Idnr, OH_... AND (OH_ModDate >	2,85

Events

Event	DB Ac...y (%)
WAITFOR	50,24
CPU	19,11
RESOURCE_SEMAPHORE	14,50
SLEEP_TASK	10,57

Sessions

User Name / Application	SPID	Active (%)
sa / SQL Diagnostic Manager Collection Service	94	3,28
sa / SQL Diagnostic Manager Collection Service	132	3,28
sa / SQL Diagnostic Manager Collection Service	132	3,28
sa / SQL Diagnostic Manager Collection Service	135	3,28

Profiling Details | IDERA Product License Manager

SQL: select top 1 spid = cast(a.spid as int), login_name = rtrim(convert(varchar(255),a.loginame)), host...

SQL Text | Events | Sessions | Procedures

```
SELECT
    TOP 1
    spid = CAST (a.spid AS INT),
    login_name = RTRIM (CONVERT (VARCHAR (255),
                                 a.loginame)),
    hostname = RTRIM (a.hostname),
    status = RTRIM (a.status),
    program_name = RTRIM (a.program_name),
    cmd = RTRIM (a.cmd),
    dbname = RTRIM (DB_NAME (a.dbid)),
    cpu = a.cpu,
    memusage = a.memusage,
```

Progress

No operations to display at this time.

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Idera SQL Query Tuner – profilowanie SQL

192.168.100.155.oar | 192.168.100.155_2.oar | 192.168.100.155_3.oar

192.168.100.155

Filter by: -None-

Profile Session

CPU | Lock | I/O | Buffer | Memory | Other

Active Sessions (avg)

Overview | SQL | Events | Sessions | Procedures

SQL Statements

Statement	DB Ac...y (%)
SELECT PMMA_Idnr, P...estamp <= @P2 ORDE	17,54
insert into #ActiveWait...in_name, statement_txt	15,69
waitfor delay '00:00:00.5'	12,99
select top 1 spid = ca...am_name), cm	11,45

Events

Event	DB Ac...y (%)
CPU	29,89
RESOURCE_SEMAPHORE	25,69
SLEEP_TASK	25,45
WAITFOR	12,99

Sessions

User Name / Application	SPID	Active (%)
sa / SQL Diagnostic Manager Collection Service	94	69,70
automic / Automation Engine JWP	66	48,48
sa / SQL Diagnostic Manager Collection Service	75	30,30
sa / SQL Diagnostic Manager Collection Service	75	18,18

Organize By
Copy
Explain Plan
Tune
Compare

Profiling Details | IDERA Product L

MMA_Idnr, PMMA_PMMD_Idnr, PMMA_Timestamp, PMMA_WP_Name, PMMA_TcpIpAddr, PMMA_SrvType, PMMA_...

SQL Text | Events | Sessions | Procedures

User Name	Application	SPID	Active (%)	Host Name	Host ...ss ID	CPU ...(ms)	Memor...ges)	Net Address	Net Library	Login Time	NT Domain	NT U...ame
automic	Autom...e JWP	66	100,00	AUTOMIC21	0	37 241	328	127.0.0.1	TCP	2022-09-...0:00.347		

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Idera SQL Query Tuner – profilowanie SQL

192.168.100.155

Filter by: Application | Automation Engine

Automation Engine
Automation Engine JCP
Automation Engine JWP
Automation Engine REST
IDERA SQL Query Tuner
Idera SQL Workload Analysis - 716@SQL2
SQL Diagnostic Manager Collection Servic

Profile Session

Active Sessions (avg)

Overview | SQL | Events | Sessions | Procedures

SQL Statements

Statement	DB Ac...y (%)
SELECT TOP 1 * FROM ...iority, MQWP_SchedT	14,35
(@P1 varchar(8),@P2 ... EH_Nextcheck <= @P2	14,35
DELETE FROM MQ1R...ERE MQRWP_PK=@P1	14,34
(@P1 int)DELETE FR...HERE MQOWP_PK=@P1	14,34
INSERT INTO MQ1PWP ...dTime, MQPWP_Statu	14,24

Events

Event	DB Ac...y (%)
CPU	100,00

Sessions

User Name / Application	SPID	Active (%)
automic / Automation Engine	61	60,00
automic / Automation Engine	80	60,00
automic / Automation Engine	81	20,00

Profiling Details | IDERA Product License Manager

SQL: SELECT TOP 1 * FROM MQ1WP with (ROWLOCK, READPAST, UPDLOCK, INDEX(NK_MQ1WP_Prio)) WHERE MQWP_SchedT...

SQL Text | Events | Sessions | Procedures

```
SELECT
    TOP 1
    *
FROM MQ1WP WITH (ROWLOCK, READPAST, UPDLOCK, INDEX (NK_MQ1WP_Prio))
WHERE MQWP_SchedTime <= CONVERT (DATETIME,
                                 CONVERT (VARCHAR (MAX),
                                          GETUTCDATE (),
                                          20),
                                 20)
ORDER BY
    MQWP_Priority,
    MQWP_SchedTime,
```

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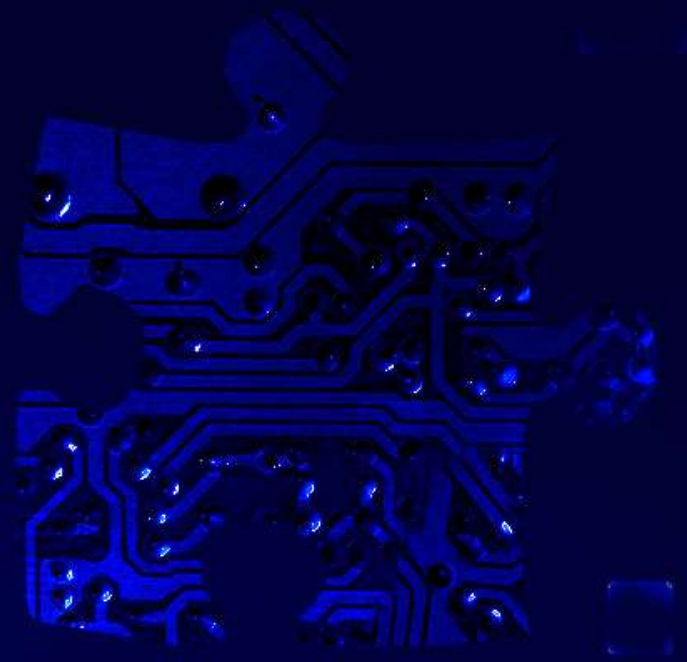
Wybrane rozwiązania Idera:
PRECISE FOR DATABASES



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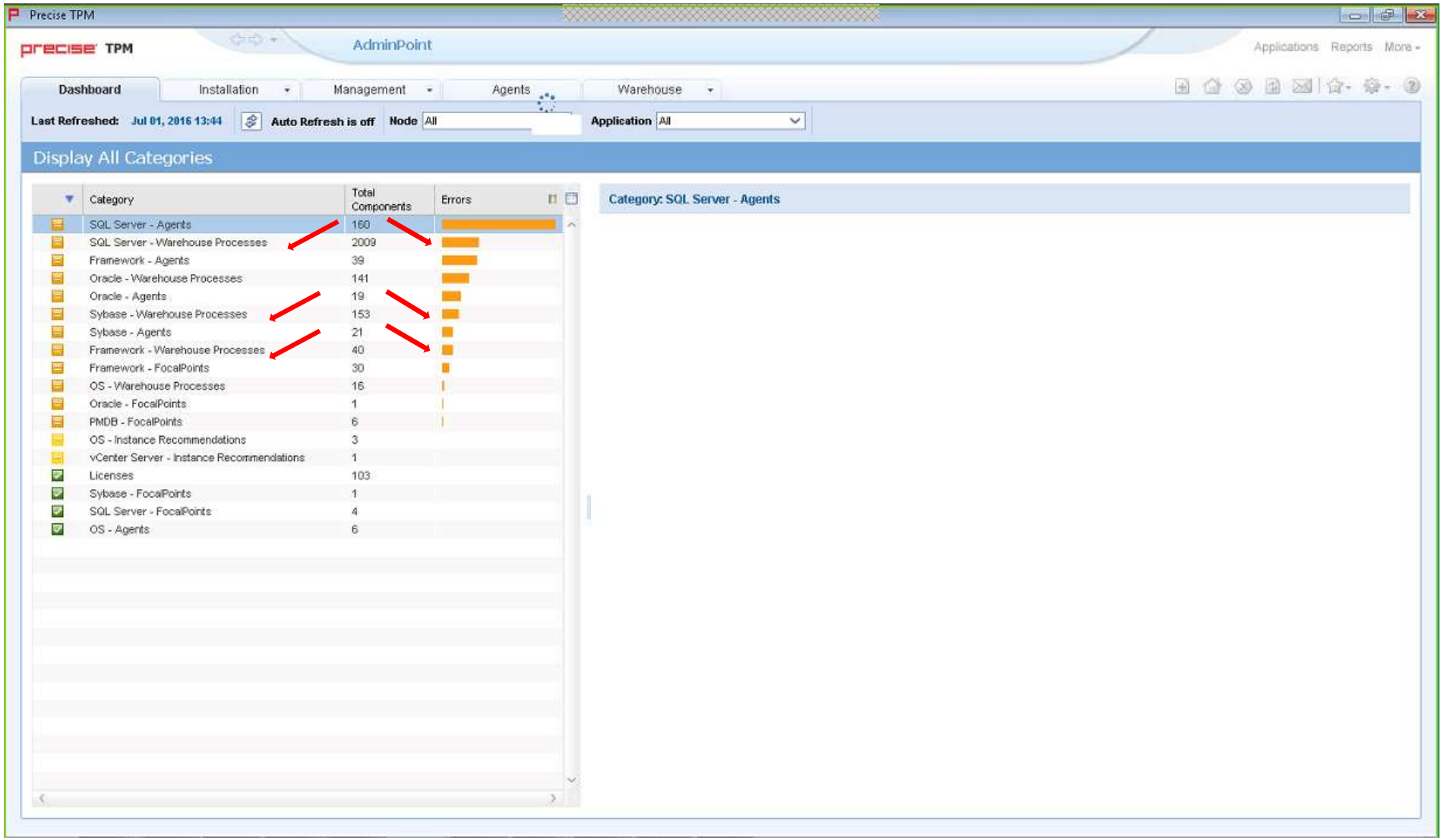
DATABASE MONITORING AND PERFORMANCE
PRECISE FOR DATABASES

- Monitorowanie czterech silników baz danych: Oracle, SQLServer, Sybase i DB2
- Te same funkcjonalności niezależnie od dostawcy DB
- Ujednolicona i scentralizowana wizja
- Ten sam wygląd i styl

Jeden panel administracyjny dla wielu baz danych



precise

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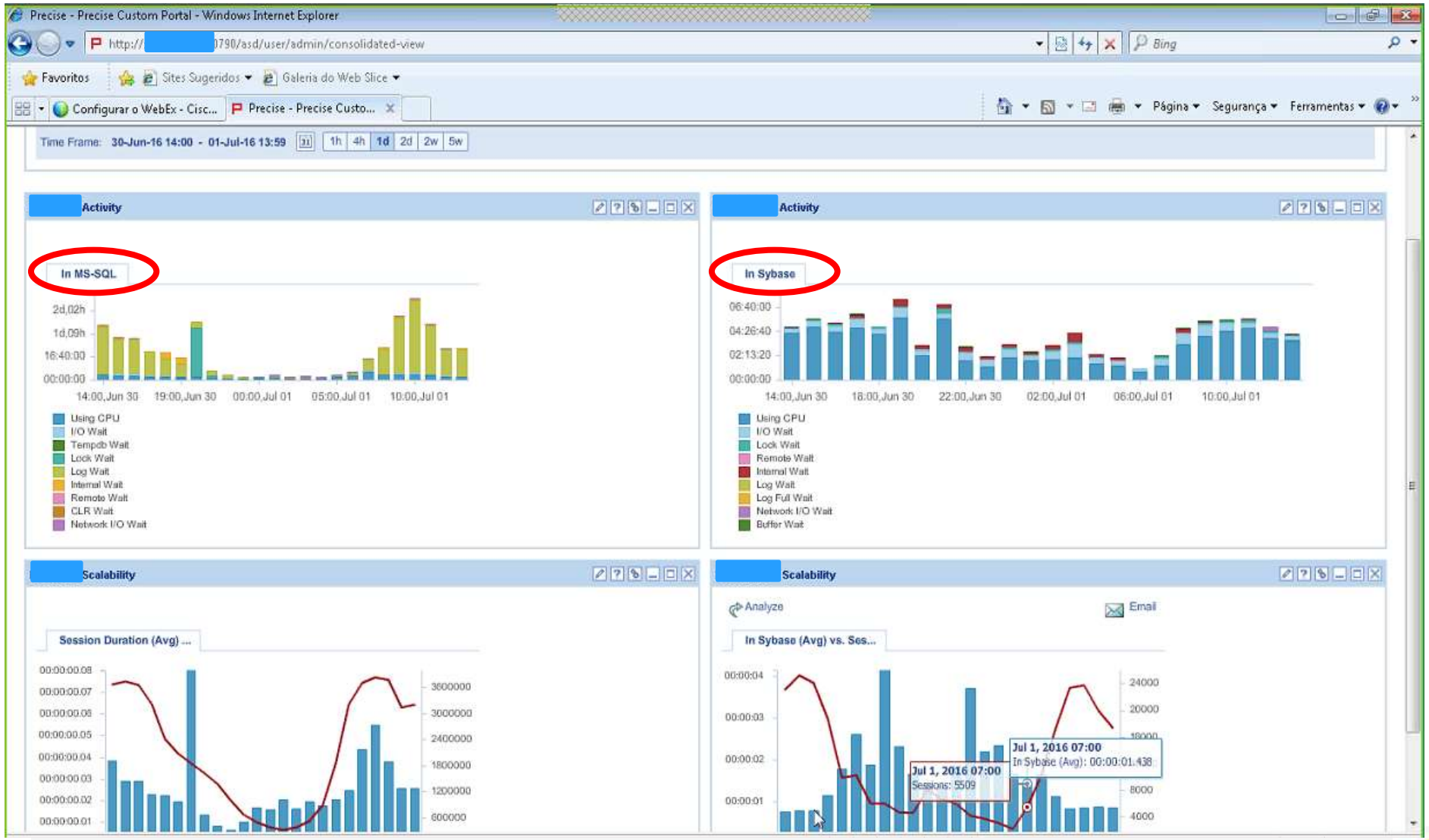
Ten sam panel dla wszystkich baz danych



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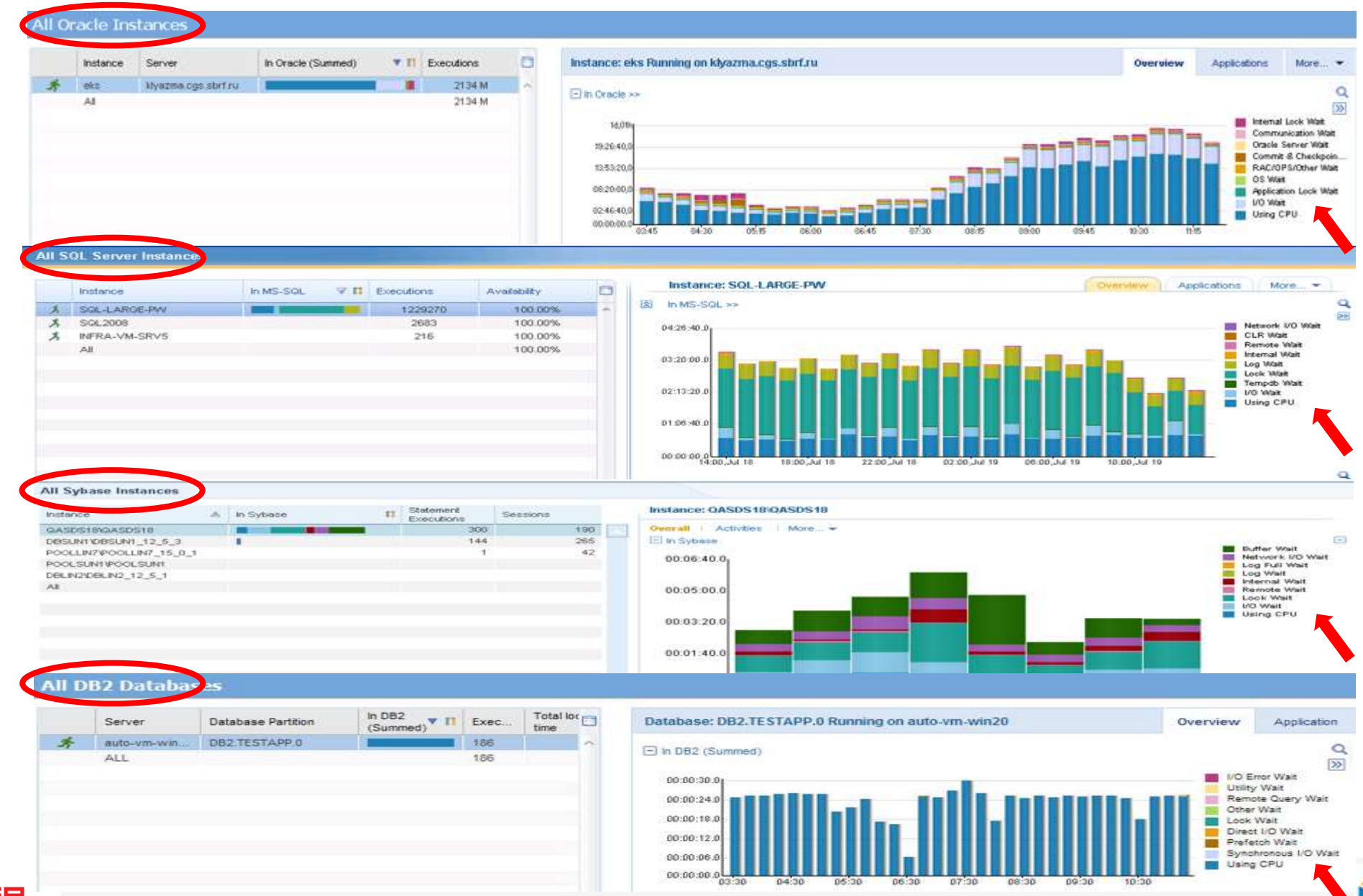
To samo GUI dla wszystkich baz danych



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Funkcjonalność Precise for Databases

- Automatyczna identyfikacja wąskich gardeł i gotowe zalecenia
- Analiza w czasie rzeczywistym – próbkowanie do 1 sekundy
- Proaktywne strojenie
- Blokady (kto i kogo)
- Stany oczekiwań (wait states)
- Analiza obiektu
- Ostrzeganie o odchyleniach (linie bazowe)
- Historia obciążenia z uwzględnieniem linii bazowych
- Monitorowanie systemu operacyjnego
- Planowanie wykorzystania zasobów (Capacity Planning)

Precise **for Databases jest potężnym narzędziem**

Automatyczne **wyniki poszukiwania wąskich gardeł**

- Koniec z czasochłonnym szukaniem „winowajcy"
- Automatyczna identyfikacja pierwotnej przyczyny
- Ścieżka dochodzenia

Optymalizacja SQL

- Zalecenia dotyczące strojenia
- Ocena wpływu zmian indeksu
- Przewidywany koszt i zysk (%)

Automatyczne wyniki dla wszystkich baz danych

Findings

	Finding	Context	Impact (%)	In Oracle (Summed)
	Heavy Statement	SELECT s_name,s_address FROM H_Supplier,H_Nation WHERE s_suppkey i...	46.00 %	

The statement consumed **46%** of Oracle resources, when **executed 3 times.**

Learn more or proceed with the following:

- Tune the statement using SQL Tune methodology.
- Examine the statement activity over time and related objects.

Heavy Statement	SELECT t.TABLE_NAME, t.OWNER, 'T' MYTYPE FROM SYS.ALL_TABLES t, ALL...	17.00 %	
Heavily Accessed Table	H_LINEITEM	13.00 %	
High Redo Log Buffer Wait		10.00 %	
High Client Communication Wait		5.00 %	

Type	Object	Impact(%)	In MS-SQL
Tempdb Major Growth			

The **tempdb** database has experienced major growth.

Learn more or proceed with the following:

- Examine instance detailed findings.
- Examine currently opened sessions using Tempdb.
- Examine tempdb logical files details.

Optymalizacja SQL

Tuning Recommendations and Impact of Index Changes

Eval...	Rem... from	Edit	Action	Owner	Table	Object	Columns	Type	DDL/Comment
✓	✖	✎	Index Creation	PRECISE_TEST	CUSTOMERS	CUSTOMERS_...	LAST_TRANSACTION,TYPE	Normal	create index CUSTOMERS_IDX
✓	✖	✎	Index Creation	PRECISE_TEST	ORDERS	ORDERS_IDX...	ORDER_DATE,TYPE	Normal	create index ORDERS_IDX$$_(
✓	✖	✎	Index Creation	PRECISE_TEST	CUSTOMERS	CUSTOMERS_...	ACCOUNT_NO	Bitmap	create bitmap index CUSTOME
✓	✖	✎	Index Creation	PRECISE_TEST	ORDERS	ORDERS_IDX...	TYPE	Normal	create index ORDERS_IDX$$_(
✓	✖	✎	Index Creation	PRECISE_TEST	REGIONS	REGIONS_IDX...	REGION_ID,REGION_MANAGER_ID	Normal	create index REGIONS_IDX$$_
✓	✖	✎	Index Creation	PRECISE_TEST	EMPLOYEES	EMPLOYEES_I...	EMPLOYEE_ID,MANAGER_ID	Normal	create index EMPLOYEES_IDX

Evaluate Add to List

Summary

Statements whose performance will improve:	4	Statements whose performance will deteriorate:	0
J2EE Caller Services whose performance will improve:	2	J2EE Caller Services whose performance will deteriorate:	0
Web Transactions whose performance will improve:	2	Web Transactions whose performance will deteriorate:	0

Web Transactions

Web Transaction	In Oracle	G... (...	Statement Executions
/testapp/transaction/1256/run	01:39:35.5	88%	292
/i3/servlet/com.veritas.gui.website.comm...	00:00:03.0	86%	1

Statements

Text	In Oracle	Cost	Predi... Cost	Gain (%)	Exec...
select count(*) from employ...	00:11...	16487	393	98%	98
select count(*) from employ...	01:22...	14157	610	96%	97
select count(*) from custom...	00:05...	35486	25125	29%	97

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Moduły Precise

- HTML 5 Gui & **portal użytkownika**
  - Analiza w czasie rzeczywistym i historycznym
  - Rozwiązywanie problemów
  - Niestandardowe pulpity nawigacyjne
- Alarmowanie
  - Automatyczne tworzenie linii bazowych
  - Proaktywne alerty
  - Działania
- Raportowanie
  - Analiza trendów
  - Odchylenie od linii bazowej
  - Planowanie wydajności

Jak działa Precise for Databases?

Precise GUI

Precise engine

Precise PMDB

Monitorowane Bazy danych
(Oracle, SQL Server, Sybase, DB2)

(1 agent per instance)

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Jak działa Precise for Databases?

precise TPM — AdminPoint — Applications | Reports | Precise Custom Portal

Dashboard | Installation | Management | Agents | Warehouse

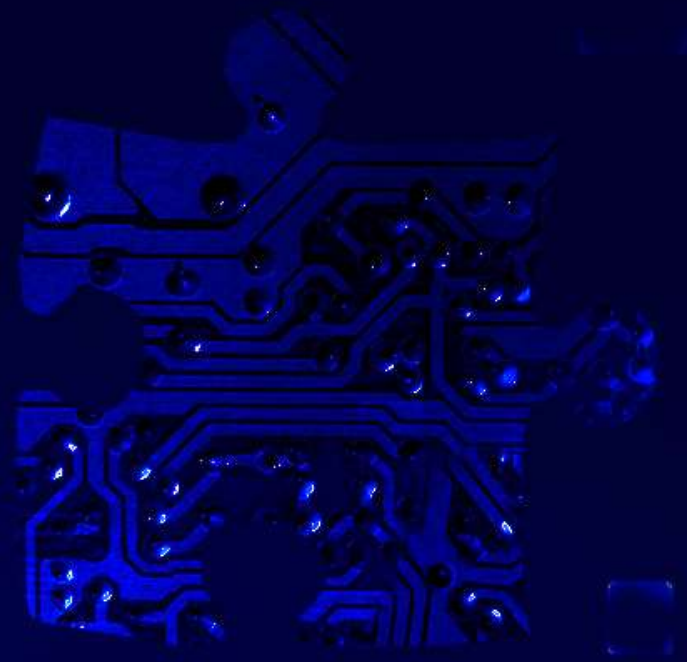
Status	Agent	Product	Most Recent Error	Agent Server	Instance	Application	Technology	Node	Last Update Time	OS
	FocalPoint	Precise for Oracle	Oct 25, 2022 10:42	192.168.100.130			Oracle	192.168.100.130	Oct 25, 2022 16:22	Linux
	FocalPoint	PMDB	Oct 25, 2022 10:42	192.168.100.130				192.168.100.130	Oct 25, 2022 16:22	Linux
	Listener	Precise		192.168.100.110				192.168.100.130	Oct 25, 2022 16:22	Linux
	OS Agent	Insight		192.168.100.110	192.168.100.110	Aplikacja_2_Oracle_test	OS	192.168.100.130	Oct 25, 2022 16:22	Linux
	Alerts Agent	Alerts		192.168.100.130				192.168.100.130	Oct 25, 2022 16:22	Linux
	FocalPoint	TPM		192.168.100.130				192.168.100.130	Oct 25, 2022 16:22	Linux
	FocalPoint	Report Manager		192.168.100.130				192.168.100.130	Oct 25, 2022 16:22	Linux
	FocalPoint	Alerts		192.168.100.130				192.168.100.130	Oct 25, 2022 16:22	Linux
	OS Agent	Insight		192.168.100.130	192.168.100.130	Aplikacja_1_Oracle_test	OS	192.168.100.130	Oct 25, 2022 16:22	Linux
	FocalPoint	Insight		192.168.100.130				192.168.100.130	Oct 25, 2022 16:22	Linux
	Oracle Agent	Precise for Oracle		192.168.100.130	precise	Aplikacja_1_Oracle_test	Oracle	192.168.100.130	Oct 25, 2022 16:22	Linux
	FocalPoint	Precise		192.168.100.130				192.168.100.130	Oct 25, 2022 16:22	Linux
	Oracle Agent	Precise for Oracle		192.168.100.110	spxmgr	Aplikacja_2_Oracle_test	Oracle	192.168.100.130	Oct 25, 2022 16:22	Linux

precise TPM — AdminPoint — Applications | Reports | Precise Custom Portal

Dashboard | Installation | Management | Agents | Warehouse

Application	Node	Tiers	Application Type	Production	Type	Location	Tag	Comment
Aplikacja_1_Oracle_test	192.168.100.130	OS,Oracle	DB Only					
Aplikacja_2_Oracle_test	192.168.100.130	OS,Oracle	DB Only					

Pytania ?

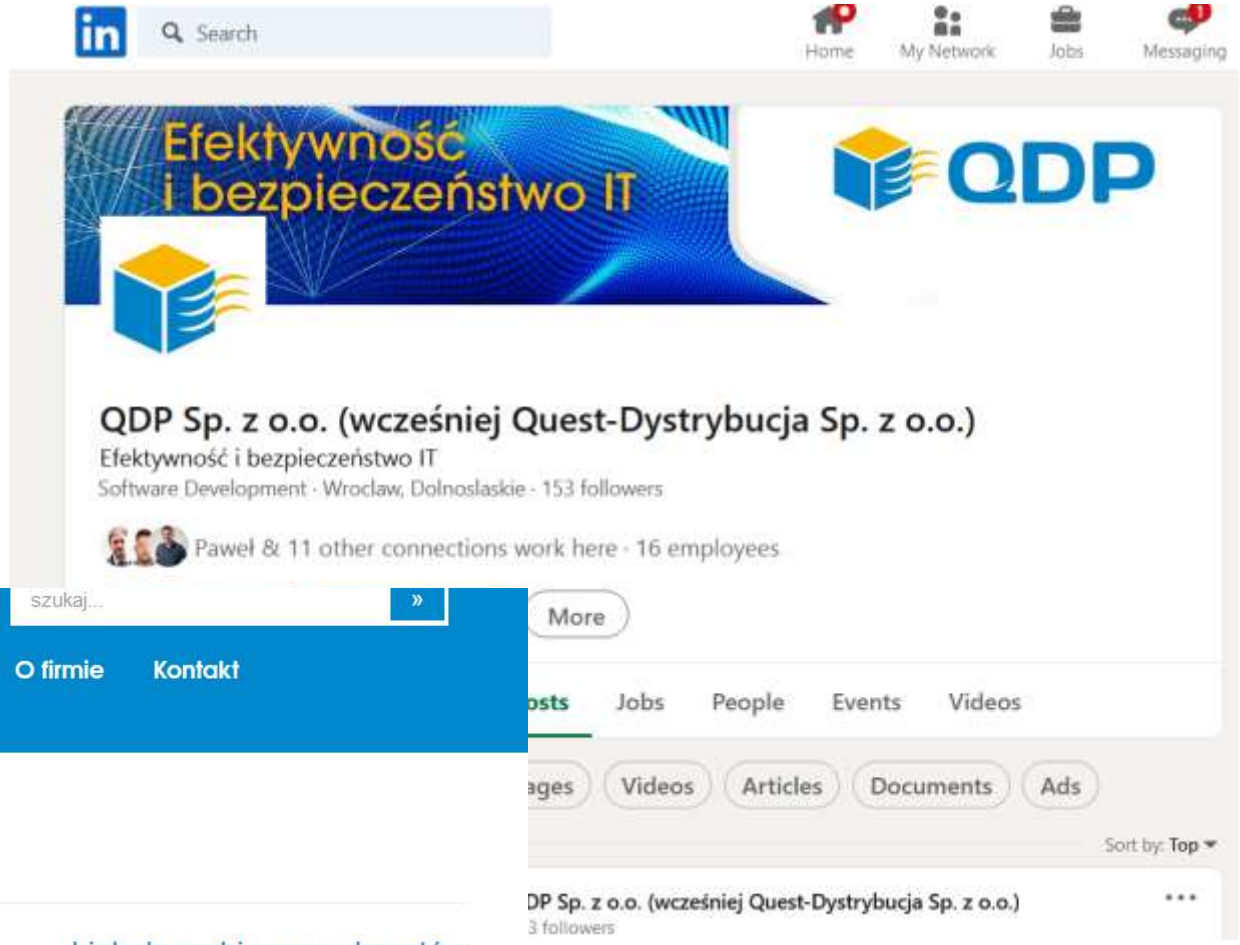


QDP Idera, Inc.

Podsumowanie

- Specjalizacja Idera – multiplatformowe środowiska bazodanowe
- Rozwiązania obecne na rynku od wielu lat i ciągle rozwijane
- Elastyczne licencjonowanie i korzystny poziom cen
- QDP – lokalne wsparcie!
  - Wieloletnie doświadczenie na rynku rozwiązań bazodanowych
  - Polskojęzyczni inżynierowie
  - Pomoc w wyborze i implementacji rozwiązania
  - Szkolenia
  - Odnowa asysty technicznej i przedłużenie subskrypcji
- Oferta specjalna – **nieodpłatne klucze rozwiązań**:
  - Aqua Data Studio
  - SQL Diagnostic Manager
  - Precise for Databases

Zapraszamy na naszą stronę i portal LinkedIn



QDP Academy – Najbliższe webcasty

Link do archiwum webcastów

Dziękujemy za uwagę

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QDP Idera, Inc.