

IDERA®

SQL Diagnostic Manager for SQL Server

# PLAN FUTURE CAPACITY

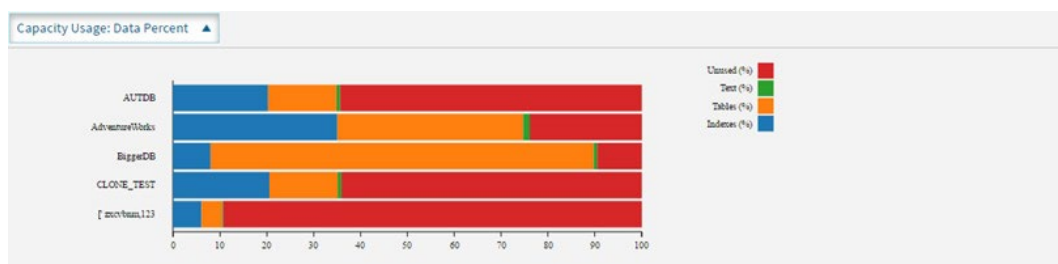
WITH SQL DIAGNOSTIC MANAGER  
FOR SQL SERVER

# PLAN FUTURE CAPACITY WITH SQL DIAGNOSTIC MANAGER FOR SQL SERVER

Capacity planning, especially when done for Microsoft SQL Server, is not for the faint of heart. Storage and disk capacity are apparent, but to right-size databases for a new SQL Server implementation or migration, there is a lot more than space to consider. Of course, sizing and future growth need to be considered. Also, it is critical to review the design, configuration, and other essential resources to ensure that the new SQL Server is performing optimally. Plan for future capacity for SQL Server with IDERA's SQL Diagnostic Manager.

## CAPACITY USAGE CHART

The Capacity Usage chart in the Summary view of the Database tab displays the usage of data and logs in the databases. This chart provides information on the text, tables, and indexes space, as well as the unused space of the databases. Refer also to the product documentation [View your SQL Server databases information](#).



# ANALYSIS REPORTS

Analysis reports provide information to analyze the current effectiveness of SQL Server systems. Analysis reports are instrumental when performing a consolidation or moving to another environment (such as the cloud). Refer also to the product documentation [Analysis reports](#).

The Top Servers report identifies your worst performing SQL Server instances based on the number of active alerts for the current monitored instances, response time, CPU usage, memory usage, and disk activity. Use this report to compile a list of instances that need immediate attention.

Tag:	All Tags
Number of Servers:	5
Date Range:	4/18/2017 to 4/18/2017

### Top Servers by Active Alerts

Instance Name	Total Alerts	Critical	Warning	Informational
<a href="#">bmanaleit7</a>	7	4	3	0
<a href="#">evalsql1</a>	5	3	2	0

### Top Servers by Response Time

Instance Name	Response Time	CPU (SQL)	Memory (OS)	Disk Activity
<a href="#">evalsql1</a>	1ms	0%	N/A	0%
<a href="#">webprod</a>	1ms	6%	42%	3%
<a href="#">bmanaleit7</a>	0ms	6%	42%	3%
<a href="#">denver</a>	0ms	6%	42%	3%
<a href="#">houston</a>	0ms	6%	42%	3%

### Top Servers by CPU Usage

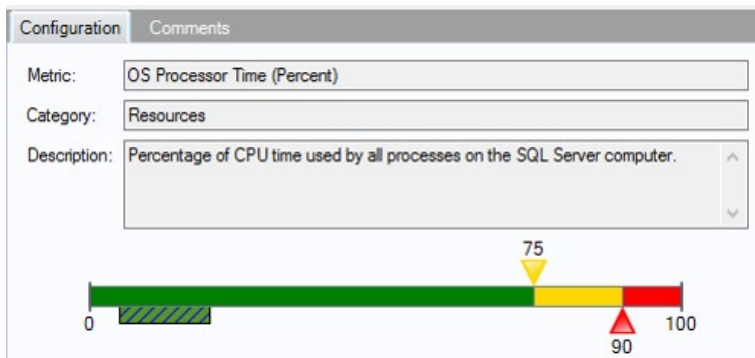
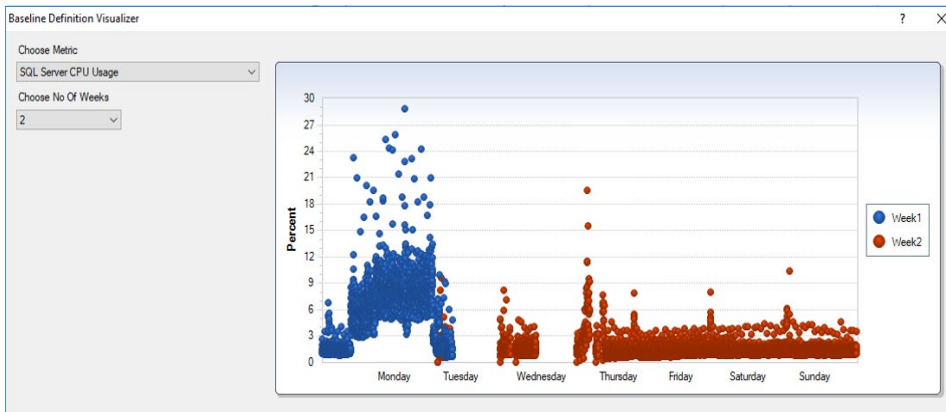
Instance Name	Response Time	CPU (SQL)	Memory (OS)	Disk Activity
<a href="#">houston</a>	0ms	6%	42%	3%
<a href="#">webprod</a>	1ms	6%	42%	3%
<a href="#">webdev-staging</a>	0ms	6%	42%	3%

## Server Analysis Reports

- **Top Servers:** Identify the 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 the worst performing queries.
- **Top Queries:** Find queries that are performing poorly or executing too frequently.
- **Alert History:** Analyze the alert history for a SQL Server.
- **Baseline Statistics:** Review and compare metric and baseline values across two SQL Server instances.

## Baseline Statistics Report

The Baseline Statistics report analyzes and compares baselines within a single SQL Server instance and across two instances. When viewing baseline statistics for a monitored SQL Server instance, compare the baseline metric values at two different times or two different metrics at the same time. Include another instance and compare baselines values occurring at the same time or at different times. View trends in the average value of a metric for a SQL Server instance and how this value changes over time for capacity planning. Baselines can be calculated related to past performance. Additionally, multiple baselines can be set up to provide a better understanding of what is “not normal” taking into consideration the time of day (for example, production hours versus maintenance hours). Refer also to the product documentation [Baseline Statistics server analysis report](#).



## Database Analysis Reports

- **Top Databases:** Identify the worst-performing databases.
- **Database Statistics:** Analyze and compare performance trends across two databases.
- **Top Database Applications:** Find database applications that consume system resources.
- **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 performance statistics for the tempdb database.
- **Transaction Log Statistics:** Analyze the use of the log files.
- **Availability Group Statistics:** View the historical health of the availability groups, availability replicas, and availability databases.

## Resource Analysis Reports

- **Session Statistics:** Track key session and network performance metrics over time.
- **CPU Statistics:** Track key CPU performance metrics.
- **Disk Details:** Track key disk metrics.
- **Disk Space Usage:** Obtain an overview of the available disk space across the SQL Server environment.
- **Disk Space History:** View the history of activity for a specific disk.
- **Disk Statistics:** Track key metrics for disk performance.
- **Replication Statistics:** Track key metrics for replication performance.
- **Memory Statistics:** Track key metrics for memory performance.

## PLAN REPORTS

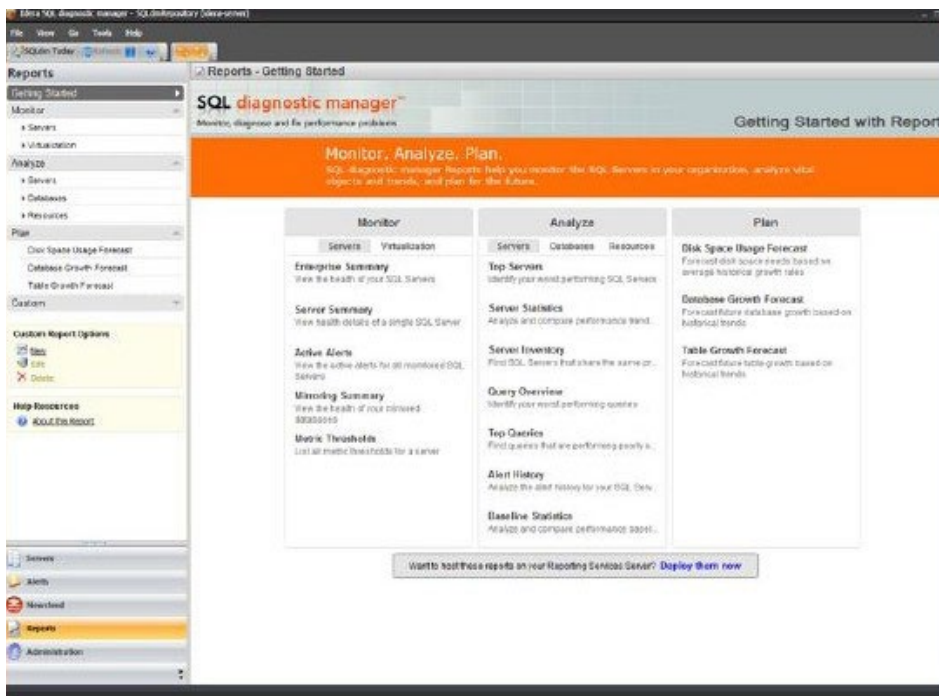
Use the Plan reports to forecast future needs based on historical growth trends. Exploit the history of the collected data to predict the amount of space consumption required at the table, database and volume levels for a point in time in the future.

Choose linear or exponential (aggressive) forecasting types when running Plan reports.

Linear forecasting follows the trend of the available data and extends the forecast out in a straight line by the number of forecast units.

Exponential forecasting tends to exaggerate the trend that exists in the data to more easily see if data is trending toward or away from a critical threshold. If the rate of growth is not constant, the exponential forecast type gives a more accurate forecast of future growth.

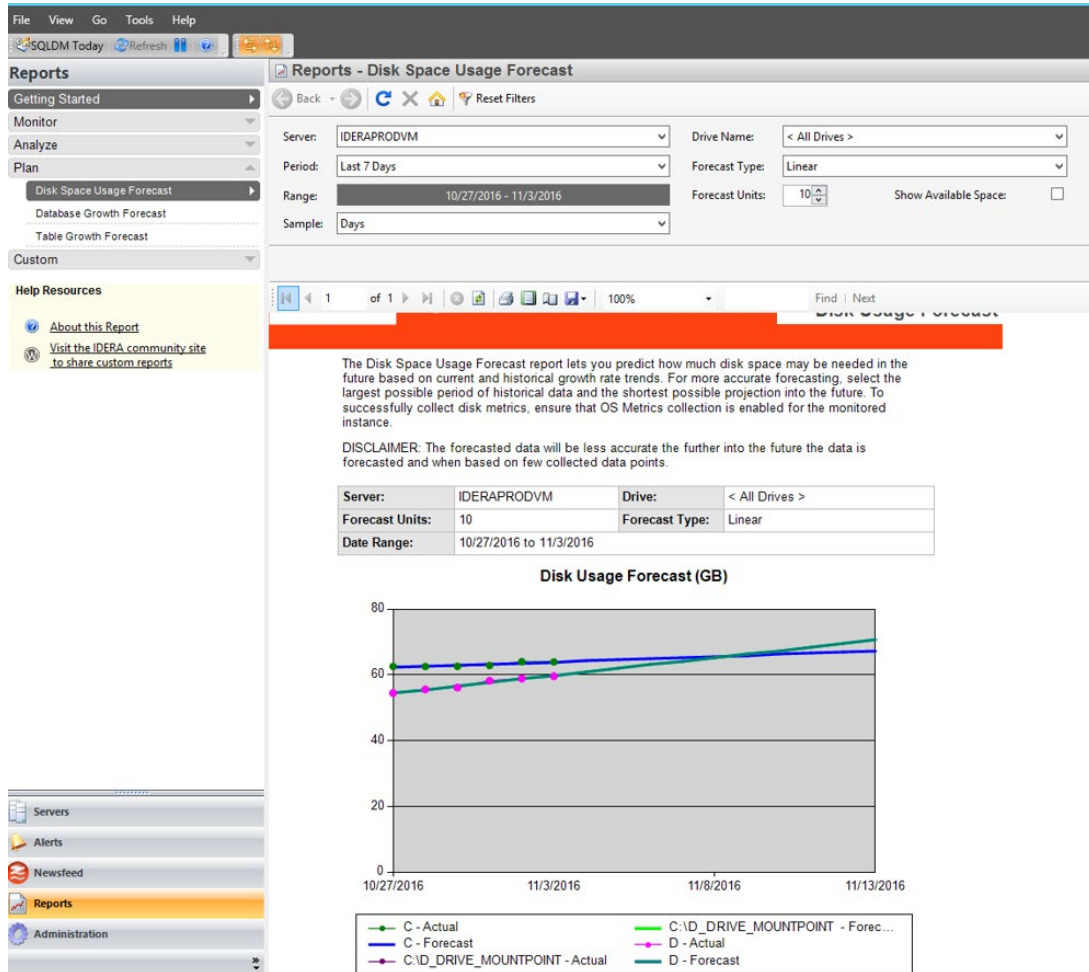
Refer also to the product documentation [Plan reports](#).





## Disk Space Usage Forecast Report

The Disk Space Usage Forecast report forecasts disk space needs. This report predicts how much disk space is needed in the future based on current and historical growth rate trends. Run this report to help anticipate the needs and plan for future acquisition of disk space.



## Database Growth Forecast report

The Database Growth Forecast report forecasts future database growth. This report predicts how large selected databases may grow based on current and historical growth rate trends. Run this report to help anticipate the needs and plan for future database expansion.

**Reports - Database Growth Forecast**

Back | Refresh | Home | Reset Filters

Server: IDERAPRODVM | Forecast Type: Linear

Database(s): SQLcompliance, SQLcompliance\_IDERAPRODVM, SQLcor | Forecast Units: 10

Period: Last 7 Days | Show Available Space:

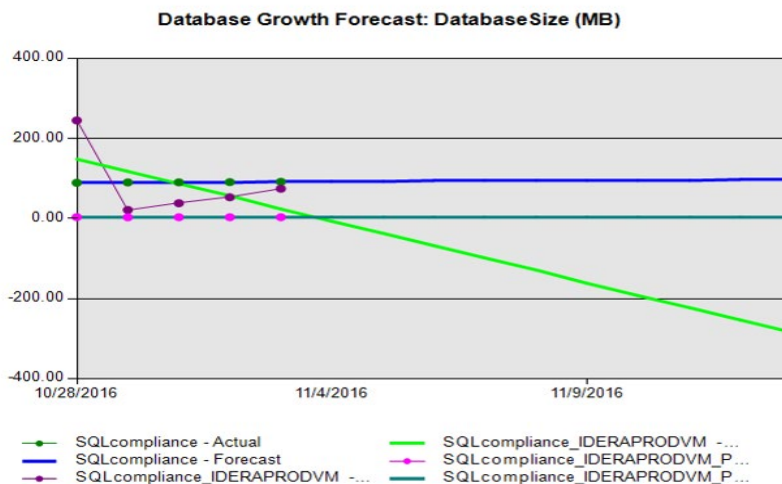
Range: 10/27/2016 - 11/3/2016

Sample: Days

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1 of 1 | 100% | Find | Next

Server:	IDERAPRODVM	Database(s):	SQLcompliance, SQLcompliance_IDERAPRODVM, SQLcor...
Forecast Units:	10	Forecast Type:	Linear
Date Range:	10/27/2016 to 11/3/2016		



**Database Growth Forecast: Database Size**

## Table Growth Forecast Report

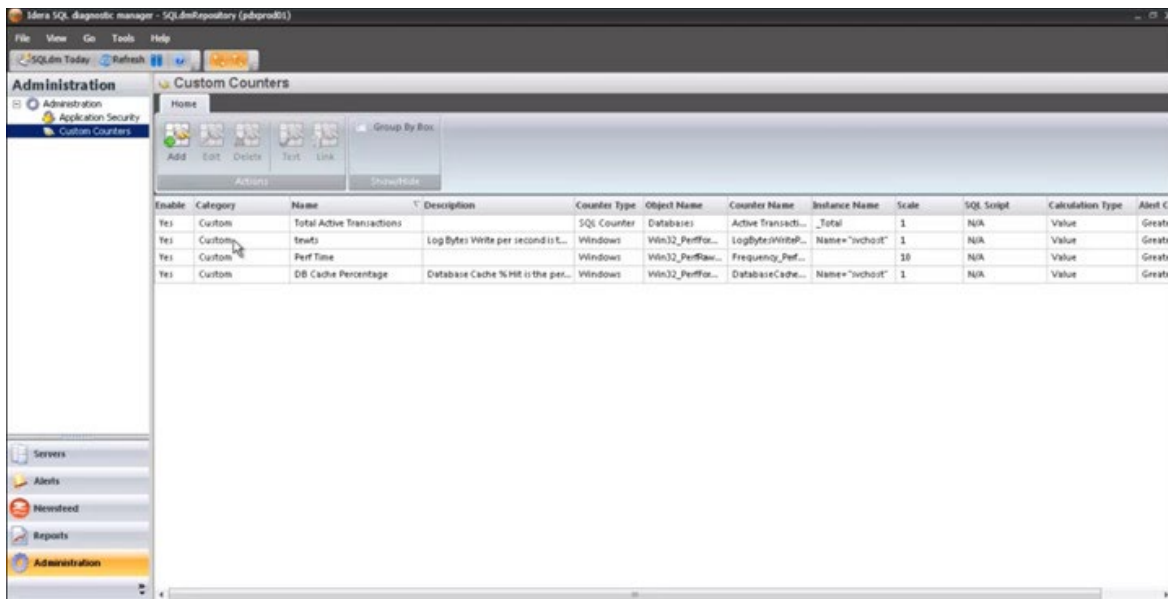
The Table Growth Forecast report forecasts future table growth. This report predicts how large selected tables may grow based on current and historical growth rate trends. Run this report to help anticipate the needs and plan for the future creation of additional tables.

## CUSTOM COUNTERS AND REPORTS

Every environment is different. SQL Diagnostic Manager has canned metrics that are monitored and collected historically for review, and canned reports. Having the ability to extend this monitoring footprint is paramount. Obscure monitoring requirements will be necessary. Having a tool that adapts to the environment is crucial.

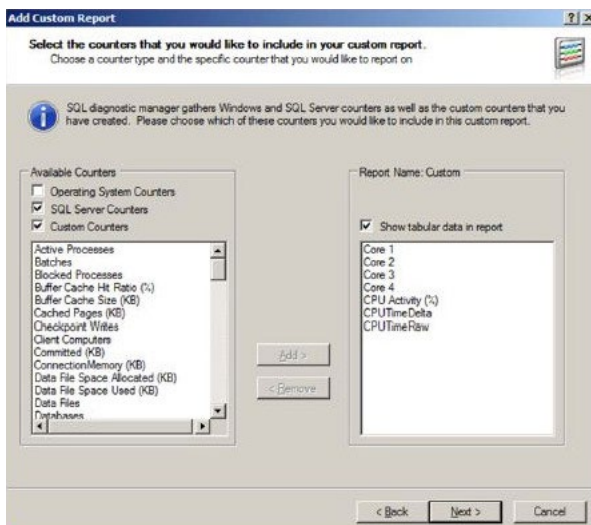
### Custom Counters

In addition to monitoring a wide variety of the most common SQL Server and operating system performance metrics, add additional performance metrics via custom counters. Add any Windows system counters including any Performance Monitor and Windows Management Instrumentation (WMI) counters. Also, add any SQL Server system counter stored in the “sysperfinfo” system table, and any numerical value that custom SQL scripts return. Also, add and any performance counters accessible through the virtual machine and host server. Refer also to the product documentation [Use custom counters to track metrics](#).



## Custom Reports

Create or edit custom reports. Include in custom reports any collected metric, including custom counters. Choose the counters to include in a report, order the way the metrics appear, and specify the aggregation method used on each of the metrics. Refer also to the product documentation [Custom reports](#).



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SQL Diagnostic Manager for SQL Server has excellent performance and capacity monitoring capabilities that identify historical issues and help with trending.

Tony Hayes **IT Manager**

(large enterprise, professional services, United Kingdom, 100 to 499 SQL Server databases)

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# GROW YOUR BUSINESS

by maximizing the availability and performance of your SQL Server databases with robust diagnostics, intelligent alerts, and expert recommendations with SQL Diagnostic Manager.

**START FOR FREE!**

