**CineCube Report**This is a report on the Avg of duration when and account is fixed to 'Benesov'. We will start by answering the original query and we complement the result with contextualization and detailed analyses.

**Answer to the original question**

|  |  |  |
| --- | --- | --- |
|  |  | central Bohemia |
|  | 04-1998 | 36.00 |
|  | 06-1998 | 48.00 |
|  | 07-1998 | 36.00 |
|  | 08-1995 | 24.00 |
|  | 09-1995 | 60.00 |
|  | 12-1997 | 36.00 |

Here, you can see the answer of the original query. You have specified and account to be equal to 'Benesov'. We report on Avg of duration grouped by account at level 2, and date at level 2 .  
You can observe the results in this table. We highlight the largest value with red and the lowest value with blue color.

**Act I: Putting results in context**In this series of slides we put the original result in context, by comparing the behavior of its defining values with the behavior of values that are similar to them.

**Assessing the behavior of account**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Summary for account | **Benesov** | Beroun | Kladno | Kolin | Kutna Hora | Melnik | Mlada Boleslav | Nymburk | Praha - vychod | Praha - zapad | Pribram | Rakovnik |
|  | 01-1994 | **-** | - | 24.00 | - | - | - | - | - | - | - | - | - |
|  | 01-1997 | **-** | - | 60.00 | 36.00 | - | - | - | 60.00 | - | - | - | - |
|  | 01-1998 | **-** | 60.00 | - | - | 24.00 | - | - | - | - | - | - | - |
|  | 02-1994 | **-** | - | - | - | - | - | - | - | - | 48.00 | - | - |
|  | 02-1995 | **-** | - | - | 60.00 | - | - | - | - | - | - | - | - |
|  | 02-1996 | **-** | - | - | - | - | 12.00 | - | - | - | - | - | 24.00 |
|  | 02-1997 | **-** | - | - | - | 60.00 | - | - | - | - | - | - | - |
|  | 02-1998 | **-** | - | - | - | - | - | - | - | 24.00 | - | 24.00 | - |
|  | 03-1994 | **-** | - | - | - | - | 12.00 | - | - | - | - | - | - |
|  | 03-1995 | **-** | - | - | - | - | - | - | - | - | - | 60.00 | - |
|  | 03-1997 | **-** | 24.00 | - | 12.00 | - | - | 24.00 | 60.00 | - | - | - | - |
|  | 03-1998 | **-** | - | - | 36.00 | - | - | - | 36.00 | - | 12.00 | 12.00 | - |
|  | 04-1995 | **-** | - | - | - | - | - | - | - | - | 24.00 | - | - |
|  | 04-1996 | **-** | - | - | - | - | - | - | - | - | - | - | 12.00 |
|  | 04-1997 | **-** | - | - | - | - | - | 24.00 | - | - | 48.00 | - | 36.00 |
|  | 04-1998 | **36.00** | - | - | - | 12.00 | - | - | 48.00 | - | - | - | - |
|  | 05-1994 | **-** | - | 48.00 | - | - | - | - | - | 60.00 | 12.00 | 12.00 | - |
|  | 05-1995 | **-** | - | 60.00 | - | - | - | - | - | - | - | - | - |
|  | 05-1998 | **-** | - | - | - | - | - | - | - | - | - | - | 12.00 |
|  | 06-1994 | **-** | - | - | - | - | - | - | - | - | 48.00 | - | - |
|  | 06-1997 | **-** | - | 36.00 | 24.00 | 48.00 | - | 60.00 | 12.00 | - | - | - | - |
|  | 06-1998 | **48.00** | - | - | - | 36.00 | 48.00 | - | - | - | - | - | - |
|  | 07-1994 | **-** | - | - | - | - | - | - | - | - | 60.00 | 24.00 | - |
|  | 07-1995 | **-** | - | - | 60.00 | - | - | - | - | 24.00 | - | - | - |
|  | 07-1998 | **36.00** | - | - | 60.00 | 60.00 | - | 36.00 | - | - | - | - | - |
|  | 08-1993 | **-** | - | - | - | - | - | - | - | - | - | 36.00 | - |
|  | 08-1994 | **-** | - | - | - | - | - | - | - | 48.00 | - | - | - |
|  | 08-1995 | **24.00** | - | - | - | - | - | - | 18.00 | - | - | - | - |
|  | 08-1996 | **-** | 48.00 | 60.00 | 24.00 | - | - | - | - | - | - | - | - |
|  | 08-1997 | **-** | - | - | - | 12.00 | - | - | - | - | - | - | - |
|  | 09-1993 | **-** | - | - | - | - | - | - | - | - | - | - | 24.00 |
|  | 09-1995 | **60.00** | - | - | - | - | - | - | - | - | - | - | - |
|  | 09-1996 | **-** | - | - | - | - | - | 36.00 | - | - | - | 36.00 | - |
|  | 09-1997 | **-** | - | - | 36.00 | 48.00 | - | - | - | - | - | - | - |
|  | 09-1998 | **-** | - | - | - | - | 24.00 | - | - | - | - | - | - |
|  | 10-1995 | **-** | - | - | - | - | - | - | - | - | 36.00 | - | - |
|  | 10-1996 | **-** | - | - | - | - | - | - | 24.00 | - | - | 60.00 | 60.00 |
|  | 10-1998 | **-** | - | - | - | - | 12.00 | - | - | - | - | - | - |
|  | 11-1995 | **-** | - | - | - | - | - | - | - | - | 24.00 | - | - |
|  | 11-1997 | **-** | 60.00 | 24.00 | - | - | - | - | 12.00 | - | 24.00 | - | - |
|  | 11-1998 | **-** | - | - | - | - | 24.00 | - | - | - | - | - | - |
|  | 12-1993 | **-** | - | - | - | 60.00 | - | - | - | - | 12.00 | - | - |
|  | 12-1994 | **-** | - | - | 60.00 | - | - | - | - | - | - | - | - |
|  | 12-1996 | **-** | - | - | - | - | - | - | - | 48.00 | - | - | - |
|  | 12-1997 | **36.00** | 12.00 | - | - | - | - | - | - | - | - | - | 12.00 |
|  | 12-1998 | **-** | 24.00 | - | - | - | - | - | - | - | - | - | 36.00 |

In this graphic, we put the original request in context by comparing the value 'Benesov' for account at level 1 with its sibling values. We highlight the reference cells with bold, the highest values with red and the lowest values with blue color. We calculate the Avg of duration while fixing and account at level 2 to be equal to ''central Bohemia''.  
Compared to its sibling we observe the following:  
In 1 out of 46 cases Benesov has higher value than Beroun.  
In 45 out of 46 cases Beroun has null value.  
In 46 out of 46 cases Kladno has null value.  
In 1 out of 46 cases Benesov has lower value than Kolin.  
In 45 out of 46 cases Kolin has null value.  
In 2 out of 46 cases Benesov has higher value than Kutna Hora.  
In 1 out of 46 cases Benesov has lower value than Kutna Hora.  
In 43 out of 46 cases Kutna Hora has null value.  
In 1 out of 46 cases Benesov has equal value than Melnik.  
In 45 out of 46 cases Melnik has null value.  
In 1 out of 46 cases Benesov has equal value than Mlada Boleslav.  
In 45 out of 46 cases Mlada Boleslav has null value.  
In 1 out of 46 cases Benesov has higher value than Nymburk.  
In 1 out of 46 cases Benesov has lower value than Nymburk.  
In 44 out of 46 cases Nymburk has null value.  
In 46 out of 46 cases Praha - vychod has null value.  
In 46 out of 46 cases Praha - zapad has null value.  
In 46 out of 46 cases Pribram has null value.  
In 1 out of 46 cases Benesov has higher value than Rakovnik.  
In 45 out of 46 cases Rakovnik has null value.

**Act II: Explaining results**In this series of slides we will present a detailed analysis of the values involved in the result of the original query. To this end, we drill-down the hierarchy of grouping levels of the result to one level of aggregation lower, whenever this is possible.

**Drilling down the Rows of the Original Result**

|  |  |  |  |
| --- | --- | --- | --- |
|  | *04-1998* |  | central Bohemia |
|  |  | 1995-08-11 | 24.00 (1) |
|  |  | 1995-09-03 | 60.00 (1) |
|  |  | 1997-12-20 | 36.00 (1) |
|  |  | 1998-04-27 | 36.00 (1) |
|  |  | 1998-06-01 | 48.00 (1) |
|  |  | 1998-07-05 | 36.00 (1) |
|  | *06-1998* |  |  |
|  |  | 1995-08-11 | 24.00 (1) |
|  |  | 1995-09-03 | 60.00 (1) |
|  |  | 1997-12-20 | 36.00 (1) |
|  |  | 1998-04-27 | 36.00 (1) |
|  |  | 1998-06-01 | 48.00 (1) |
|  |  | 1998-07-05 | 36.00 (1) |
|  | *07-1998* |  |  |
|  |  | 1995-08-11 | 24.00 (1) |
|  |  | 1995-09-03 | 60.00 (1) |
|  |  | 1997-12-20 | 36.00 (1) |
|  |  | 1998-04-27 | 36.00 (1) |
|  |  | 1998-06-01 | 48.00 (1) |
|  |  | 1998-07-05 | 36.00 (1) |
|  | *08-1995* |  |  |
|  |  | 1995-08-11 | 24.00 (1) |
|  |  | 1995-09-03 | 60.00 (1) |
|  |  | 1997-12-20 | 36.00 (1) |
|  |  | 1998-04-27 | 36.00 (1) |
|  |  | 1998-06-01 | 48.00 (1) |
|  |  | 1998-07-05 | 36.00 (1) |
|  | *09-1995* |  |  |
|  |  | 1995-08-11 | 24.00 (1) |
|  |  | 1995-09-03 | 60.00 (1) |
|  |  | 1997-12-20 | 36.00 (1) |
|  |  | 1998-04-27 | 36.00 (1) |
|  |  | 1998-06-01 | 48.00 (1) |
|  |  | 1998-07-05 | 36.00 (1) |
|  | *12-1997* |  |  |
|  |  | 1995-08-11 | 24.00 (1) |
|  |  | 1995-09-03 | 60.00 (1) |
|  |  | 1997-12-20 | 36.00 (1) |
|  |  | 1998-04-27 | 36.00 (1) |
|  |  | 1998-06-01 | 48.00 (1) |
|  |  | 1998-07-05 | 36.00 (1) |

In this slide, we expand dimension date by drilling down from level 2 to level 1. For each cell we show both the Avg of duration and the number of tuples that correspond to it in parentheses. We highlight the 90 lowest values in blue and the 54 largest in red color.  
Some interesting findings include:  
Column central Bohemia has 54 of the 54 highest values.  
Column central Bohemia has 90 of the 90 lowest values.

**Drilling down the Columns of the Original Result**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | *central Bohemia* |  | 01-1994 | 01-1997 | 01-1998 | 02-1994 | 02-1995 | 02-1996 | 02-1997 | 02-1998 | 03-1994 | 03-1995 | 03-1997 | 03-1998 | 04-1995 | 04-1996 | 04-1997 | 04-1998 | 05-1994 | 05-1995 | 05-1998 | 06-1994 | 06-1997 | 06-1998 | 07-1994 | 07-1995 | 07-1998 | 08-1993 | 08-1994 | 08-1995 | 08-1996 | 08-1997 | 09-1993 | 09-1995 | 09-1996 | 09-1997 | 09-1998 | 10-1995 | 10-1996 | 10-1998 | 11-1995 | 11-1997 | 11-1998 | 12-1993 | 12-1994 | 12-1996 | 12-1997 | 12-1998 |
|  |  | Benesov | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 36.00 (1) | - | - | - | - | - | 48.00 (1) | - | - | 36.00 (1) | - | - | 24.00 (1) | - | - | - | 60.00 (1) | - | - | - | - | - | - | - | - | - | - | - | - | 36.00 (1) | - |
|  |  | Beroun | - | - | 60.00 (1) | - | - | - | - | - | - | - | 24.00 (1) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 48.00 (1) | - | - | - | - | - | - | - | - | - | - | 60.00 (1) | - | - | - | - | 12.00 (1) | 24.00 (1) |
|  |  | Kladno | 24.00 (1) | 60.00 (1) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 48.00 (1) | 60.00 (1) | - | - | 36.00 (1) | - | - | - | - | - | - | - | 60.00 (1) | - | - | - | - | - | - | - | - | - | - | 24.00 (1) | - | - | - | - | - | - |
|  |  | Kolin | - | 36.00 (1) | - | - | 60.00 (1) | - | - | - | - | - | 12.00 (1) | 36.00 (1) | - | - | - | - | - | - | - | - | 24.00 (1) | - | - | 60.00 (1) | 60.00 (1) | - | - | - | 24.00 (1) | - | - | - | - | 36.00 (1) | - | - | - | - | - | - | - | - | 60.00 (1) | - | - | - |
|  |  | Kutna Hora | - | - | 24.00 (1) | - | - | - | 60.00 (1) | - | - | - | - | - | - | - | - | 12.00 (1) | - | - | - | - | 48.00 (1) | 36.00 (1) | - | - | 60.00 (1) | - | - | - | - | 12.00 (1) | - | - | - | 48.00 (1) | - | - | - | - | - | - | - | 60.00 (1) | - | - | - | - |
|  |  | Melnik | - | - | - | - | - | 12.00 (1) | - | - | 12.00 (1) | - | - | - | - | - | - | - | - | - | - | - | - | 48.00 (1) | - | - | - | - | - | - | - | - | - | - | - | - | 24.00 (1) | - | - | 12.00 (1) | - | - | 24.00 (1) | - | - | - | - | - |
|  |  | Mlada Boleslav | - | - | - | - | - | - | - | - | - | - | 24.00 (1) | - | - | - | 24.00 (1) | - | - | - | - | - | 60.00 (1) | - | - | - | 36.00 (1) | - | - | - | - | - | - | - | 36.00 (1) | - | - | - | - | - | - | - | - | - | - | - | - | - |
|  |  | Nymburk | - | 60.00 (1) | - | - | - | - | - | - | - | - | 60.00 (1) | 36.00 (1) | - | - | - | 48.00 (1) | - | - | - | - | 12.00 (1) | - | - | - | - | - | - | 18.00 (2) | - | - | - | - | - | - | - | - | 24.00 (1) | - | - | 12.00 (1) | - | - | - | - | - | - |
|  |  | Praha - vychod | - | - | - | - | - | - | - | 24.00 (1) | - | - | - | - | - | - | - | - | 60.00 (1) | - | - | - | - | - | - | 24.00 (1) | - | - | 48.00 (1) | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | - | 48.00 (1) | - | - |
|  |  | Praha - zapad | - | - | - | 48.00 (1) | - | - | - | - | - | - | - | 12.00 (1) | 24.00 (1) | - | 48.00 (1) | - | 12.00 (1) | - | - | 48.00 (1) | - | - | 60.00 (1) | - | - | - | - | - | - | - | - | - | - | - | - | 36.00 (1) | - | - | 24.00 (1) | 24.00 (1) | - | 12.00 (1) | - | - | - | - |
|  |  | Pribram | - | - | - | - | - | - | - | 24.00 (1) | - | 60.00 (1) | - | 12.00 (1) | - | - | - | - | 12.00 (1) | - | - | - | - | - | 24.00 (1) | - | - | 36.00 (1) | - | - | - | - | - | - | 36.00 (1) | - | - | - | 60.00 (1) | - | - | - | - | - | - | - | - | - |
|  |  | Rakovnik | - | - | - | - | - | 24.00 (1) | - | - | - | - | - | - | - | 12.00 (1) | 36.00 (1) | - | - | - | 12.00 (1) | - | - | - | - | - | - | - | - | - | - | - | 24.00 (1) | - | - | - | - | - | 60.00 (1) | - | - | - | - | - | - | - | 12.00 (1) | 36.00 (1) |

In this slide, we expand dimension account by drilling down from level 2 to level 1. For each cell we show both the Avg of duration and the number of tuples that correspond to it in parentheses. We highlight the 378 lowest values in blue and the 453 largest in red color.  
Some interesting findings include:  
Column 01-1997 has 42 of the 453 highest values.  
Column 07-1998 has 42 of the 453 highest values.  
Column 10-1996 has 42 of the 453 highest values.  
Column 03-1998 has 34 of the 378 lowest values.  
Column 05-1994 has 34 of the 378 lowest values.  
Column 12-1997 has 34 of the 378 lowest values.

**Summary**-In this slide we summarize our findings.  
-  
-First, we tried to put the original result in context, by comparing its defining values with similar ones.  
-When we compared Benesov to its siblings, grouped by account and date, we observed the following:  
-  
-In 1 out of 46 cases Benesov has higher value than Beroun.  
-In 45 out of 46 cases Beroun has null value.  
-In 46 out of 46 cases Kladno has null value.  
-In 1 out of 46 cases Benesov has lower value than Kolin.  
-In 45 out of 46 cases Kolin has null value.  
-In 2 out of 46 cases Benesov has higher value than Kutna Hora.  
-In 1 out of 46 cases Benesov has lower value than Kutna Hora.  
-In 43 out of 46 cases Kutna Hora has null value.  
-In 1 out of 46 cases Benesov has equal value than Melnik.  
-In 45 out of 46 cases Melnik has null value.  
-In 1 out of 46 cases Benesov has equal value than Mlada Boleslav.  
-In 45 out of 46 cases Mlada Boleslav has null value.  
-In 1 out of 46 cases Benesov has higher value than Nymburk.  
-In 1 out of 46 cases Benesov has lower value than Nymburk.  
-In 44 out of 46 cases Nymburk has null value.  
-In 46 out of 46 cases Praha - vychod has null value.  
-In 46 out of 46 cases Praha - zapad has null value.  
-In 46 out of 46 cases Pribram has null value.  
-In 1 out of 46 cases Benesov has higher value than Rakovnik.  
-In 45 out of 46 cases Rakovnik has null value.  
-  
-Then we analyzed the results by drilling down one level in the hierarchy.  
-When we drilled down date, we observed the following facts:  
-  
-Column central Bohemia has 54 of the 54 highest values.  
-Column central Bohemia has 90 of the 90 lowest values.  
-When we drilled down account, we observed the following facts:  
-  
-Column 01-1997 has 42 of the 453 highest values.  
-Column 07-1998 has 42 of the 453 highest values.  
-Column 10-1996 has 42 of the 453 highest values.  
-Column 03-1998 has 34 of the 378 lowest values.  
-Column 05-1994 has 34 of the 378 lowest values.  
-Column 12-1997 has 34 of the 378 lowest values.