

# **QGRIP**

## **Charges Split Costs**

**GRIP ON SOL**

**2024-04-16**

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## 1 Introduction

### Charge Applications for use Infra

The Charges, Split Costs module is an easy, flexible and powerful way to split the costs of the SQL Server environment and fairly charge the Applications using it.

- **Prices per month**
- **Split Costs by Instance/App/DB**
- **Penalties possible for**
  - **Unlimited Data/Log**
  - **Not Cluster Aware**
  - **Unwanted versions OS/SQL**
- **Reports per Month, Quarter, Year**

The different prices are per month but can easily be copied to the next month. If an error is discovered in the past, you can go back in time with some data loss.

If an object is shared, you can define on which level to split the costs to make it as fair as possible.

Penalties can be defined for constructions that might cause continuity errors or cost extra effort during maintenance. You can also define extra costs for databases running on old SQL / OS versions.

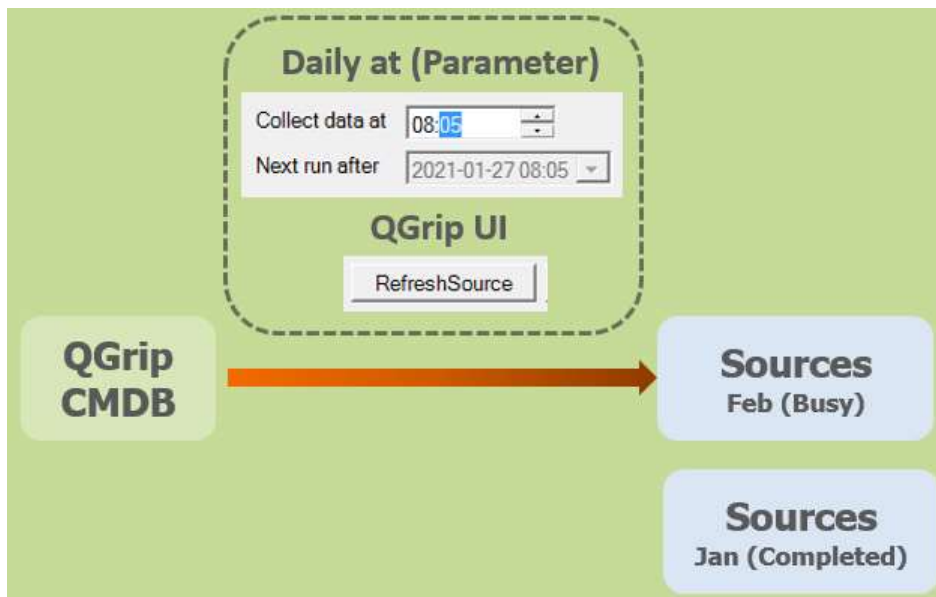
Reports are available per month, quarter of a year and year.

## 2 Charges



Charges is the combination of Sources (the infra) and the prices for a certain period.

### 2.1 Sources



The sources are filled from the QGrip CMDB. Daily at a certain time or when the button 'RefreshSource' is pushed in the Charges window. The Sources of the current (busy) month is always filled/updated.

**Sources is snapshot of CMDB.**  
**Sources with status Completed cannot be changed.**  
**Make sure all objects are Link2App correctly.**

When a new month begins, the prior month is set to completed and will after that moment not change any more.

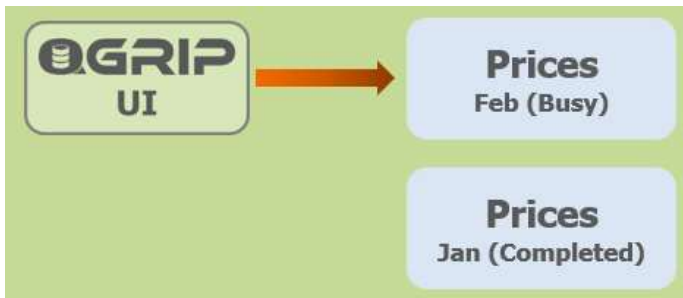
**Check Charges before end of month.**

**Special attention to**

**Server: Licensed Cores**  
**Application: Cost-ID + Is Cluster Aware + Unit**  
**Unit: Cost-ID + Organisation**  
**Organisation: Cost-ID**

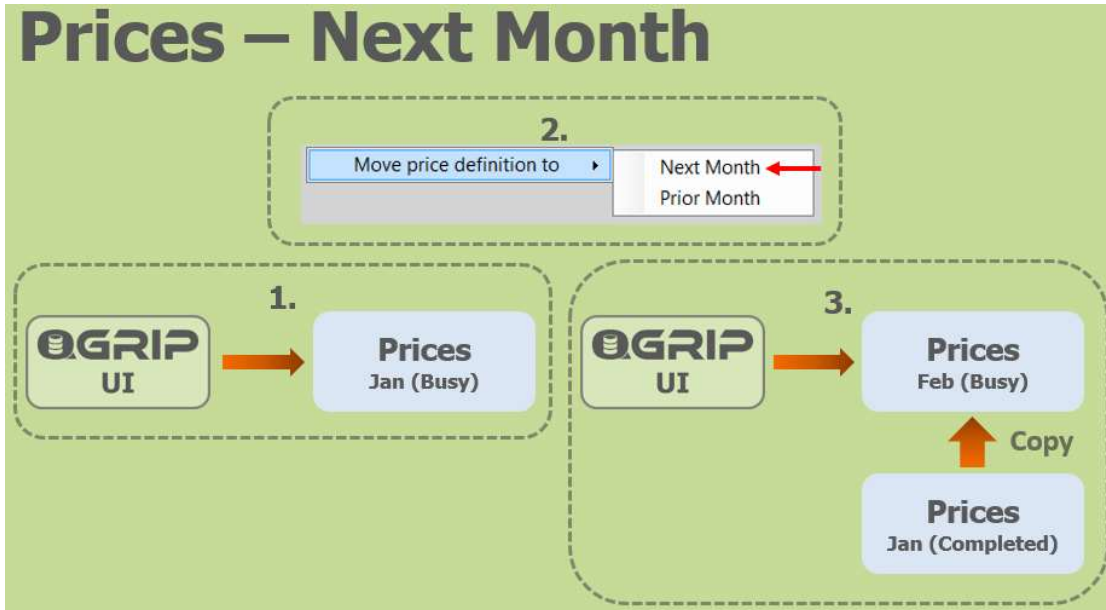
If this information is not correct the last day of the month, the Charges reports will not be complete and accurate.

2.2 Prices



It is only possible to edit the Prices of the busy price month.

## Prices – Next Month



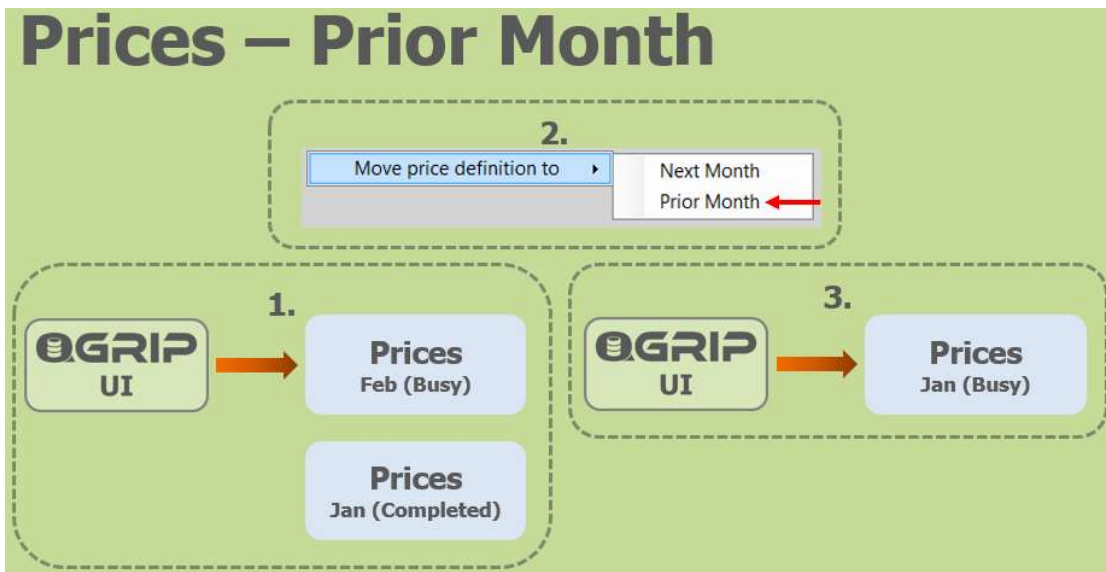
To close the current Prices month (busy) and move on to the next is a manual action.

The prices are copied to the next month (Jan -> Feb).

The Next month gets status busy and is editable (Feb).

The Last month gets status completed and is locked for changes (Jan).

## Prices – Prior Month



It is possible to reopen the prior Prices month to correct prices.

The prices of the currently busy month are deleted (Feb).  
 The Prior month gets status busy and is editable (Jan).

Philosophy is that if something is incorrect in a prior month, it will also be incorrect in the subsequent months that should also be corrected.

## 3 Example Monthly Progress

### 3.1 January



Sources filled from CMDB for current month (January).  
 Adjust Prices + Estimate Charges for January.  
 Move price definition not possible.

### 3.2 February



Sources filled from CMDB for current month (February).  
 Adjust Prices + Calculate Charges for January.  
 Move price definition to February possible.

### 3.3 March



Sources filled from CMDB for current month (March).

Adjust Prices + Calculate Charges for January.  
 Move price definition to February possible.

**Manually: Move price -> Next month (February)**



Sources filled from CMDB for current month (March).  
 Prices January copied to Prices February.  
 Adjust Prices + Calculate Charges for February.

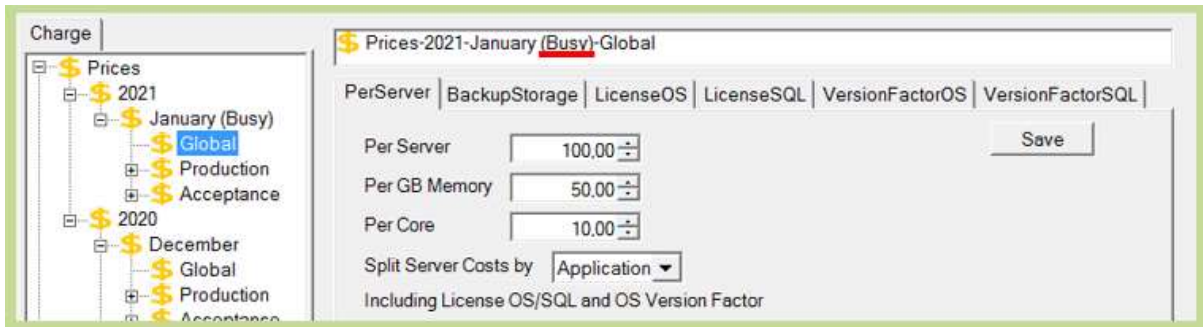
**Manually: Move price -> Prior month (January)**



Sources filled from CMDB for current month (March).  
 Prices and Charges for February have been deleted.  
 Adjust Prices + Calculate Charges for January.



## 4 Prices – Edit



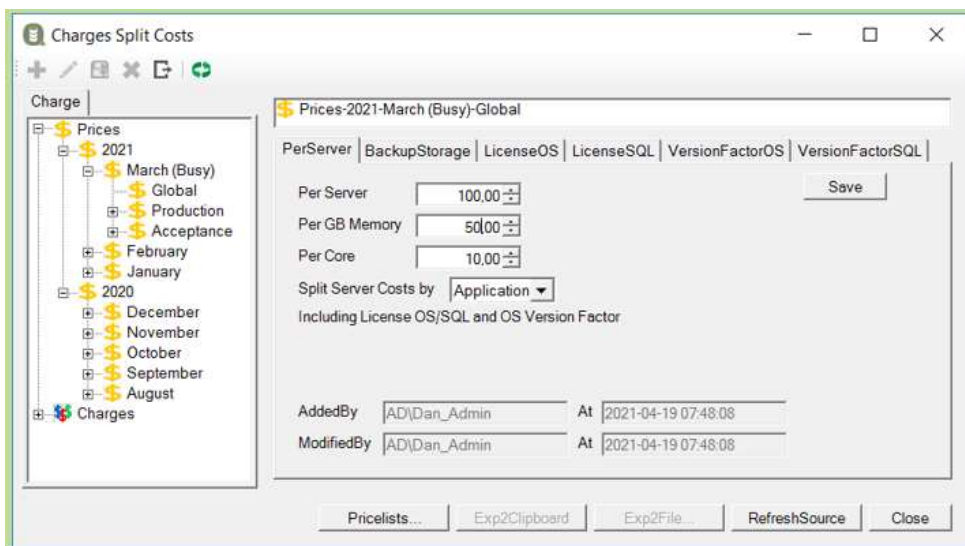
The prices are only editable in the Busy Prices month, otherwise they are visible but greyed out. In each Price tab, there is a [Save] button. You MUST hit the save button for changes in each tab, otherwise the changes will be lost.

### 4.1 Prices – First time



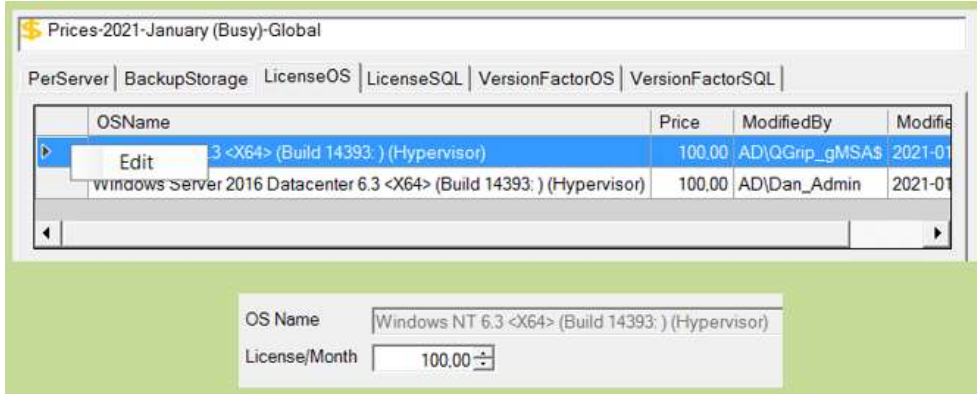
Initially, the Prices are filled with default values. In the first month in your system, you will need to check and adjust the Global Prices and the prices for each Environment.

### 4.2 Prices – Global





Prices of objects that cannot be directly related to one specific (DTAP) environment are referred to as global. A server can host multiple Instances that can be for different (DTAP) environments and is regarded as global. This does also apply to Backup Storage.



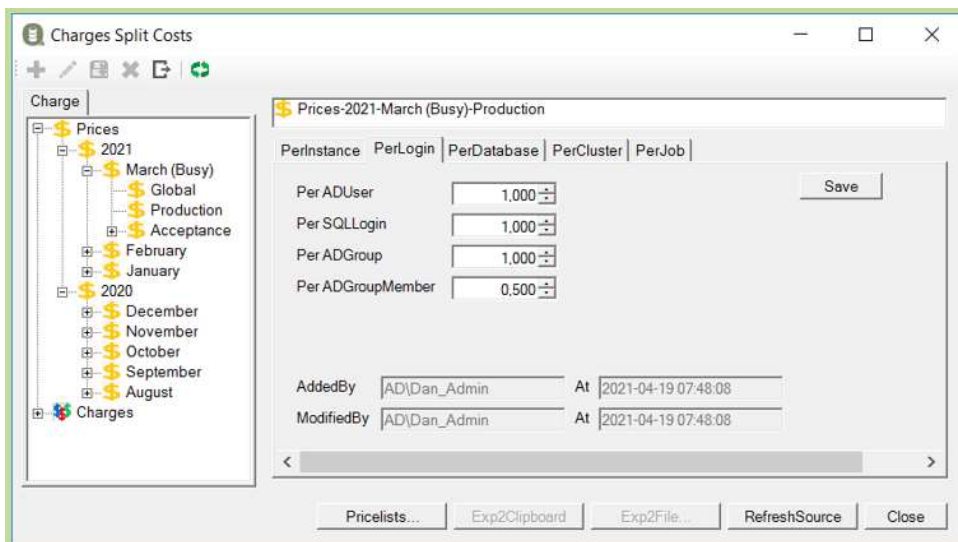
To edit the occurrences in tabs that contains a list, right-click the row to edit.

## Tab

- LicenseOS
- LicenseSQL
- VersionFactorOS
- VersionFactorSQL

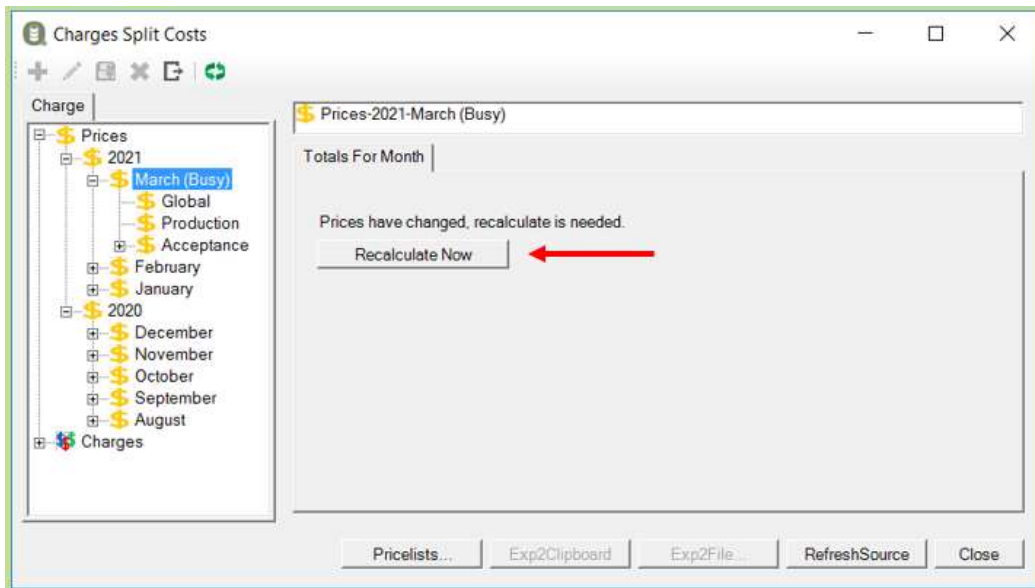
These tabs contain lists.

### 4.3 Prices – Per Environment



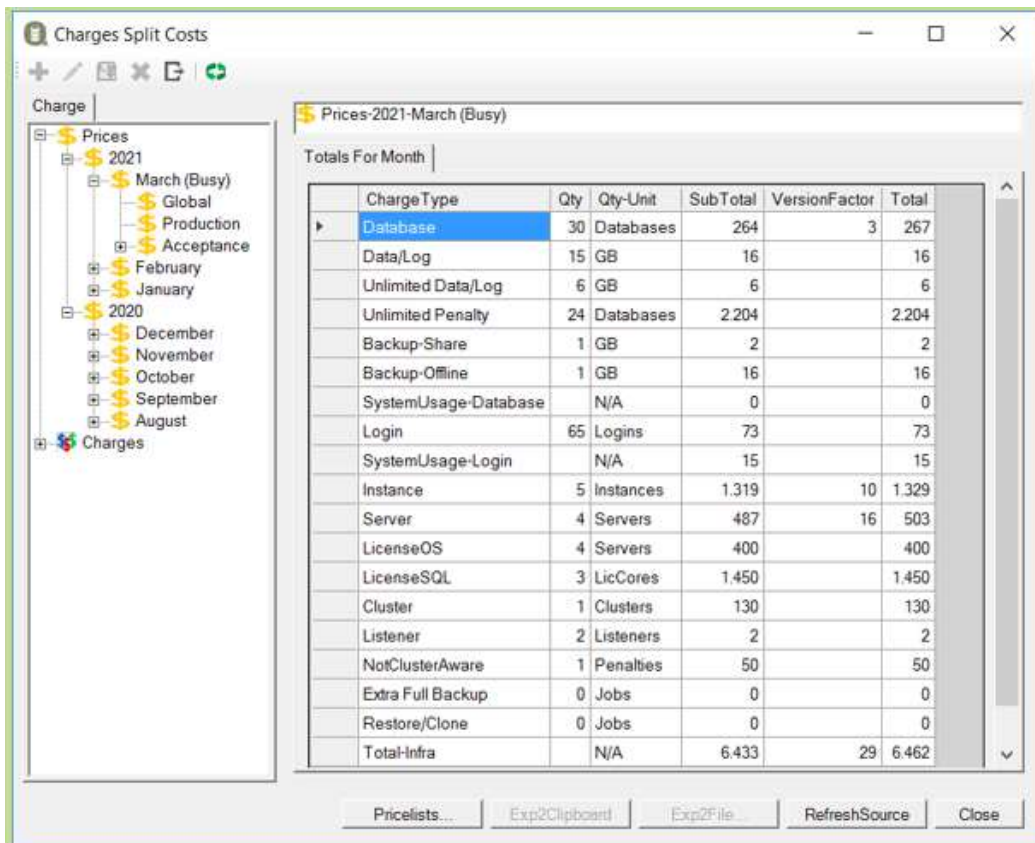
The prices for the different environments need to be edited separately.

### 4.4 Prices – Recalculate



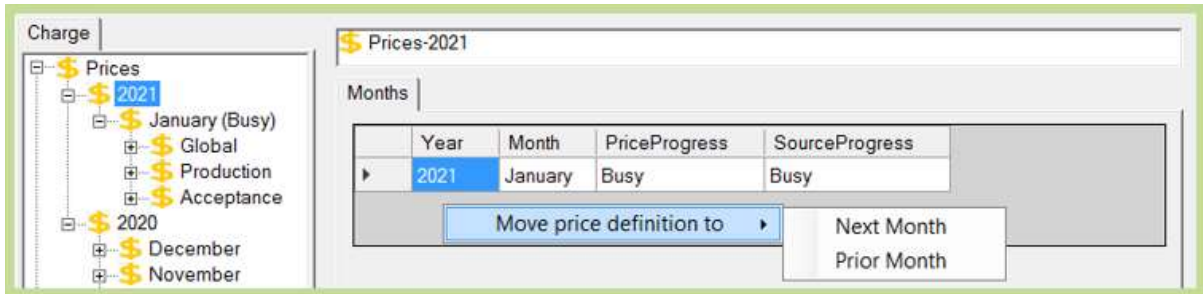
If one or more prices have been changed, recalculate is needed for the Totals per Month. Instead of showing the normal Totals overview, the 'Recalculate Now' button will be visible.

## 4.5 Prices – Totals per Month

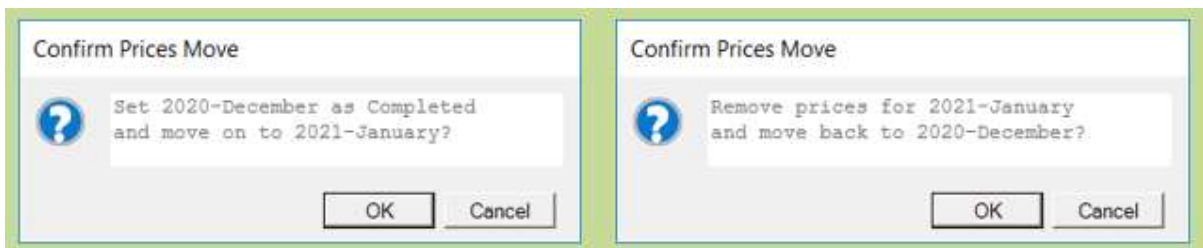


The Totals per Month is visible if a month has been selected. This is an overview of the charges based on the current filling of the Sources with the defined prices for the month.

## 4.6 Prices – Move price definition

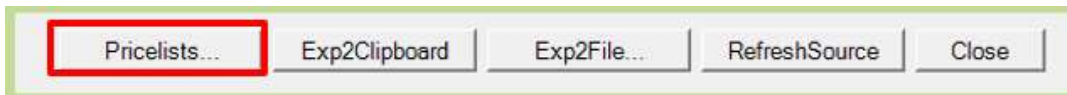


Right-Click in the Months overview of a year to move the busy month forward (Next Month) or backwards (Prior Month).

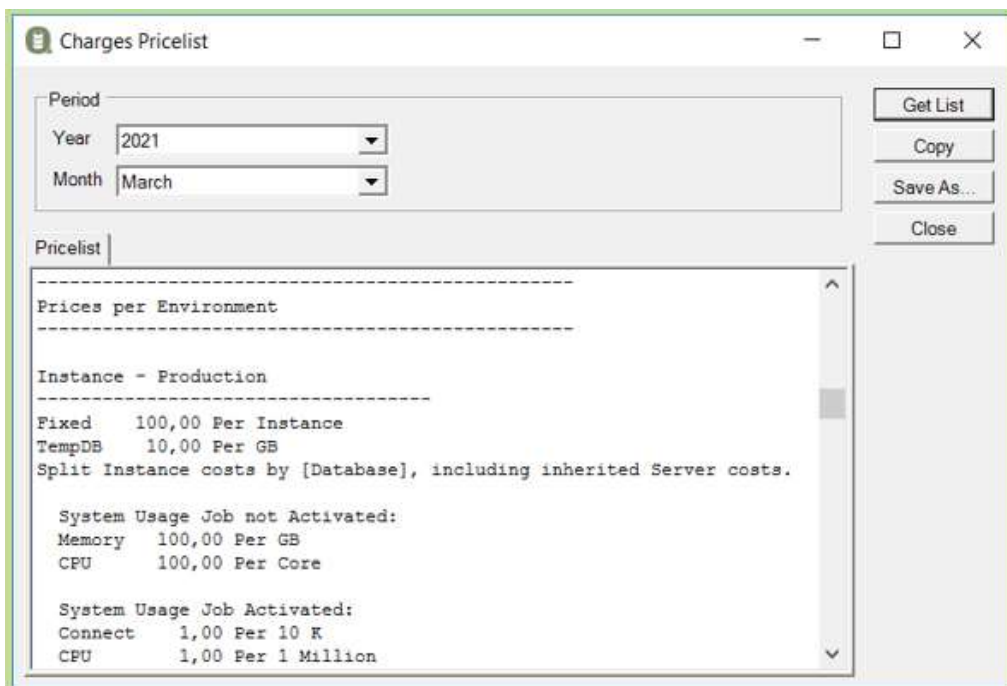


The move needs to be confirmed.

## 4.7 Prices – Pricelists



When the Pricelists button is clicked in the Charges window, the Pricelists window is opened.

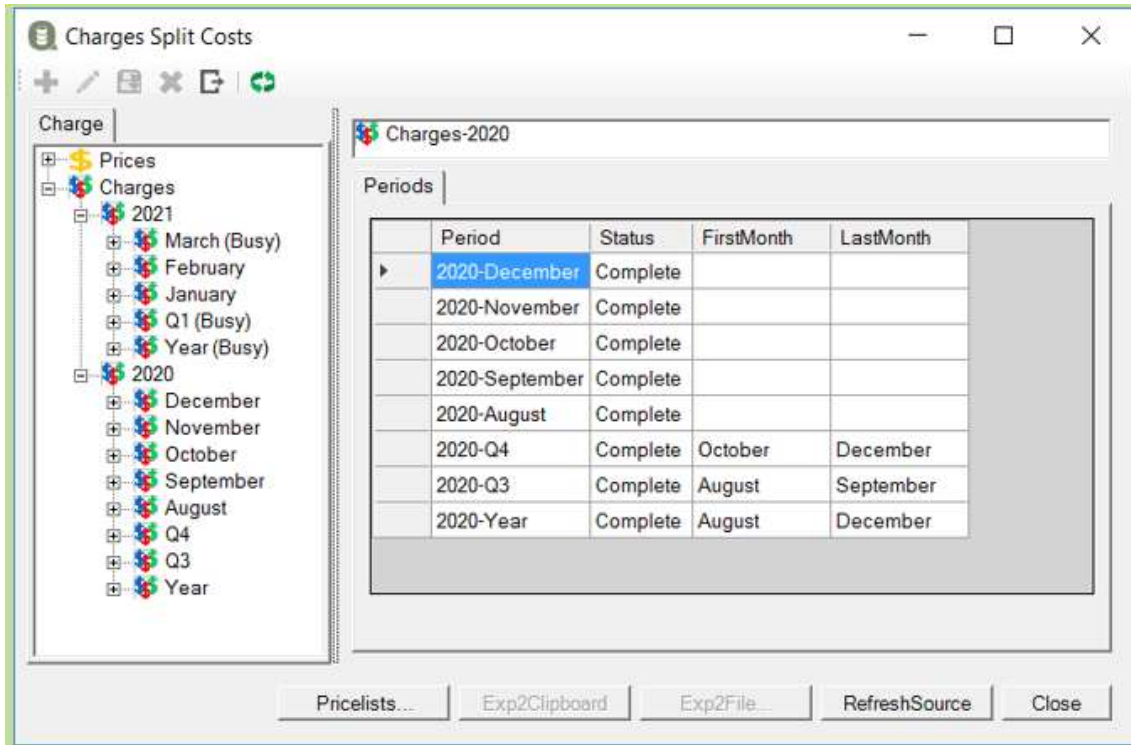


All defined prices for the selected month will be shown in flat format.

## 5 Charges – Reports

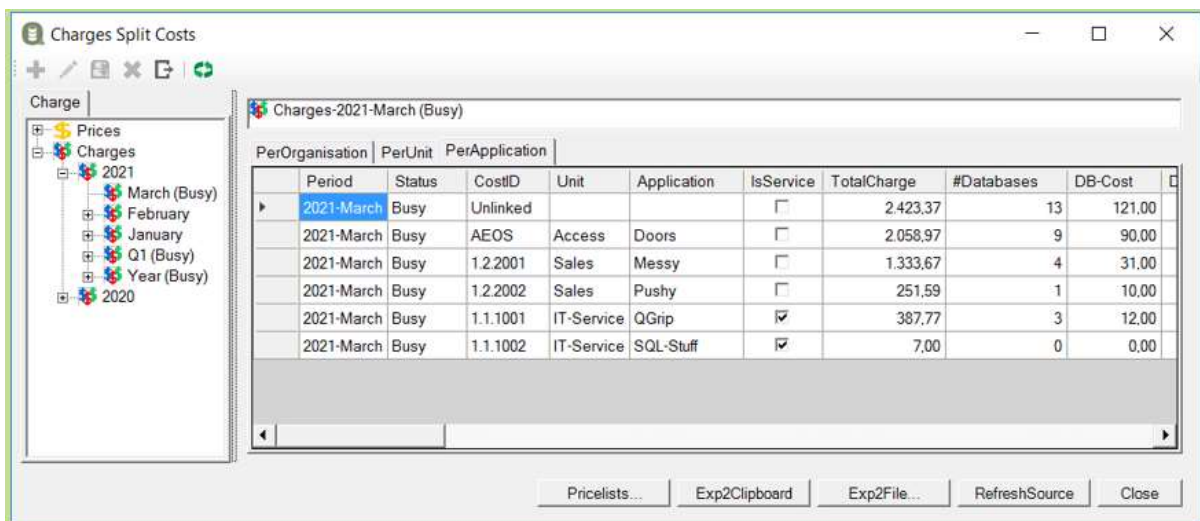
Use the Tree view to navigate to the Report you want to see and select the Year or period.

### 5.1 Charges – Year



When selecting a year, all periods with charges reports in that year, will be visible. The year and the Q1-Q4 will also show the first and last month in the report.

### 5.2 Charges – Period



When a period is selected, 3 tabs will be available:

- Per Organisation

- Per Unit
- Per Application

Objects that have not been Linked to an application in QGrip, will appear under a separate Cost ID:

- Unlinked

## 5.3 Charges – Columns

The reports contain a lot of columns that can be referenced for details. The following are the most important.

### Per Organisation

Column	Example	Description
Period	2021-January	Report Period
Status	Busy	Busy or Completed
CostID	1.01.20	Cost ID Organisation
Organisation	Grip on SQL	Name Organisation
TotalCharge	12.411,00	Total Cost Organisation

### Per Unit

Column	Example	Description
Period	2021-January	Report Period
Status	Busy	Busy or Completed
CostID	2.01.20	Cost ID Unit
Organisation	Grip on SQL	Name owning Organisation
Unit	Sales	Name Unit
TotalCharge	5.411,00	Total Cost Unit

### Per Application

Column	Example	Description
Period	2021-January	Report Period
Status	Busy	Busy or Completed
CostID	3.01.20	Cost ID Application
Unit	Sales	Name owning Unit
Application	Pushy	Name Application
IsService	0	0 or 1, indicating of application is service or not
TotalCharge	1.411,00	Total Cost Unit

Rest of columns, same for all types

Column	Description
#Databases	Number of distinct databases
DB-Cost	
DB-Data/Log	
DB-Unlimited-Data/Log	
DB-Unlimited-Penalty	
DB-Backup-Share	

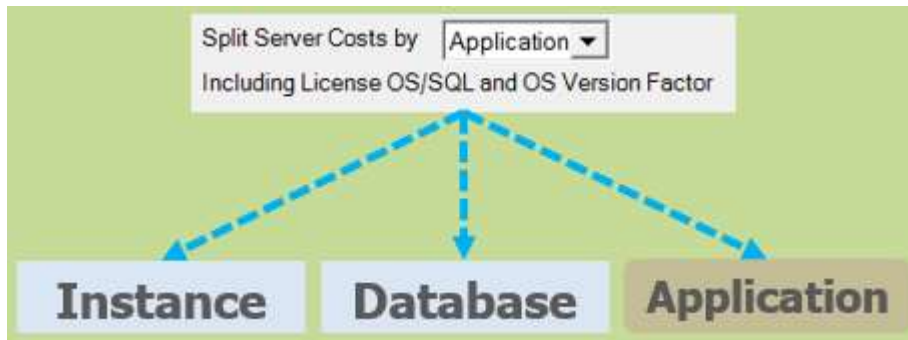
DB-Backup-Offline	
DB-SystemUsage	
DB-VersionFactor-SQL	
#Logins	Number of distinct Logins
Login-Cost	
Login-SystemUsage	
#Instances	Number of distinct Instances used
Instance-Cost	
VersionFactor-SQL	
#Servers	Number of distinct Servers used
Server-Cost	
VersionFactor-OS	
License-OS	
License-SQL	
#Clusters	Number of distinct Clusters used
Cluster-Cost	
#Listeners	Number of distinct Listeners used
Listener-Cost	
#NotClusterAware	Number of Not Cluster aware penalties
NotClusterAware-Cost	
#Jobs	Number of Jobs charged
Job-Cost	
ReportDate	Date Report run



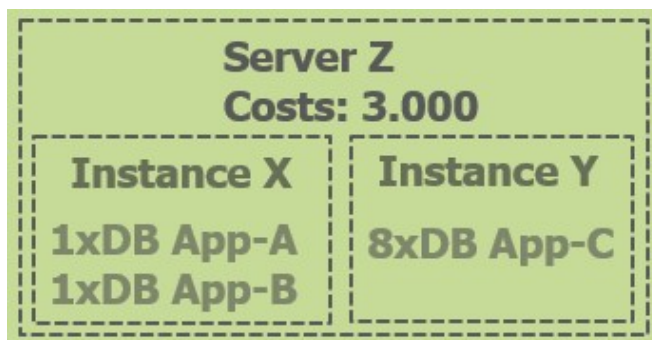
## 6 Prices/Costs

In this section, a summary of the prices and split by options per object type.

### 6.1 Split by – what is fair?



Eventually, the Applications will be charged for all costs but how big share they are charged with depend on how the costs are split.



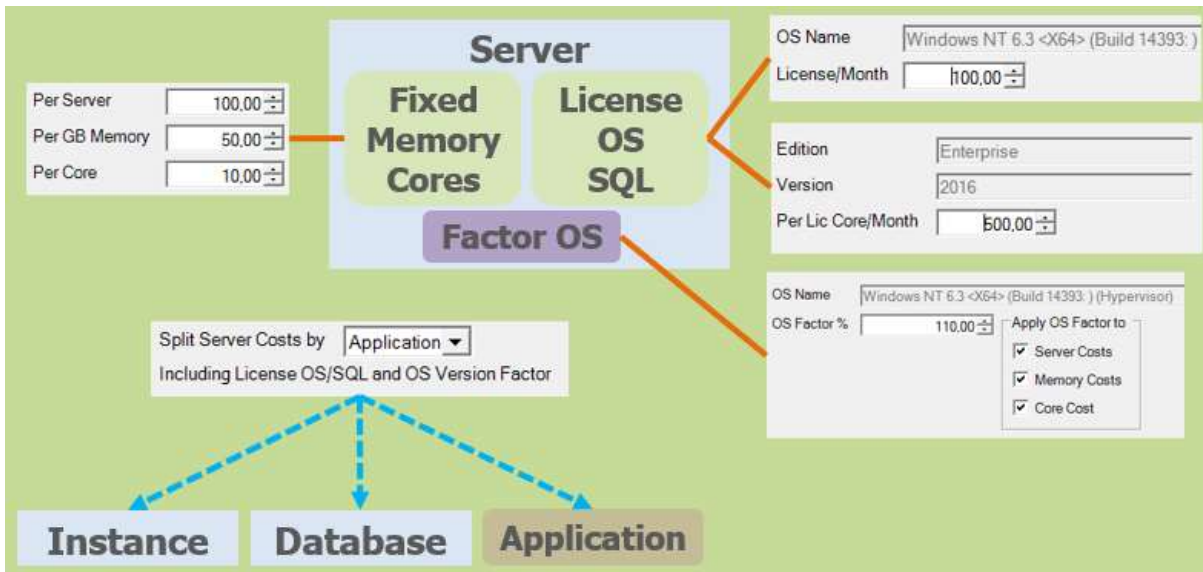
Consider the example above. 1 Server with 2 instances, 10 databases and 3 applications.

<b>Costs: 3.000</b>		
<b>Instance</b>	<b>Database</b>	<b>Application</b>
<b>1.500/Instance</b>	<b>300/DB</b>	<b>1.000/App</b>
App-A: 750	App-A: 300	App-A: 1.000
App-B: 750	App-B: 300	App-B: 1.000
App-C: 1.500	App-C: 2.400	App-C: 1.000

The Charges for the Applications differ quite a bit depending on the how the costs are split and the question is; what is fair?

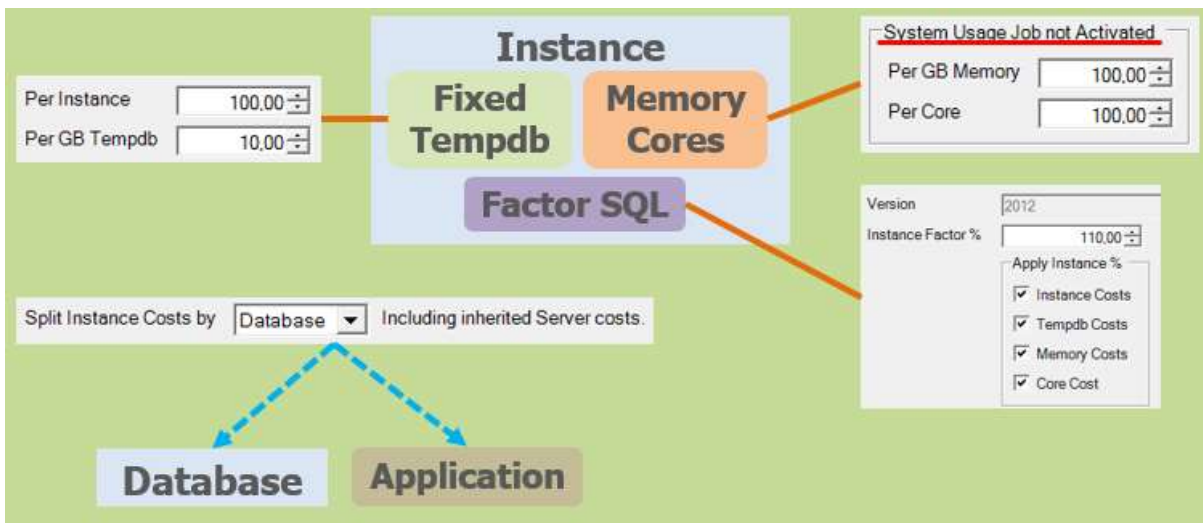
### 6.2 Server Prices/Costs





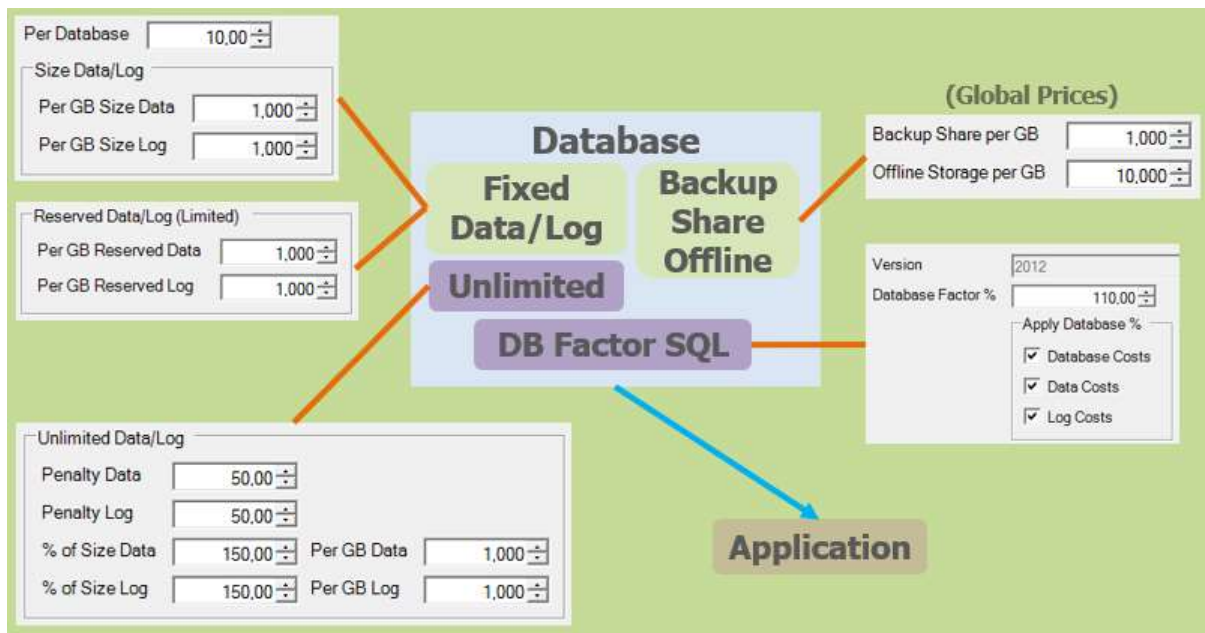
The server prices are global (same for all environments). Server costs can be split by Instance, Database or Application.

### 6.3 Instance Prices/Costs



Prices must be specified for all environments. Note that the costs for Memory and Cores will only be charged if the System Usage job has not been activated for the Instance. Instance costs can be split by Database or Application.

### 6.4 Database Prices/Costs



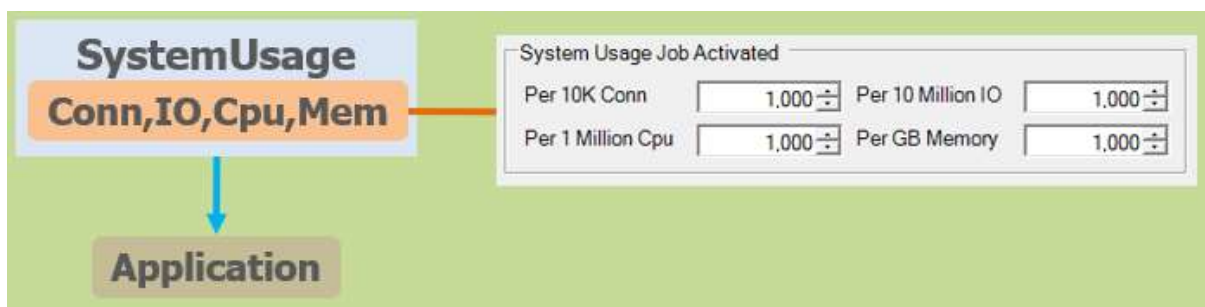
Prices must be specified for all environments except for the Backups and the Version factor.

Reserved Data/Log is the price for the difference between Max Size and Current Size of the Data/Log. Only calculated when Max Size has been set.

### Unlimited Data/Log

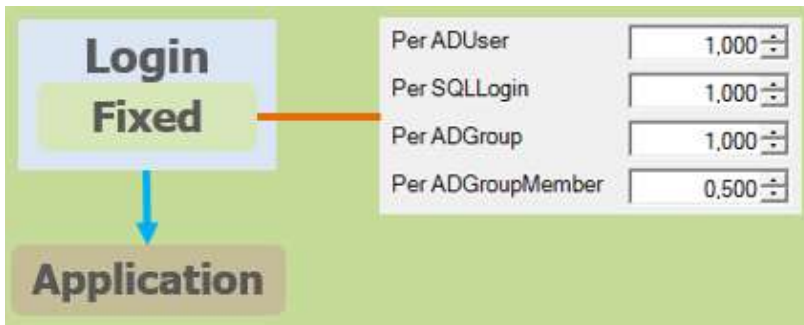
Penalty is a fixed amount. '% of Size Data' is the percentage that should be used to calculate an estimated Max Size from the actual Size. The outcome in GB will be charges with the amount per GB defined.

## 6.5 System Usage Prices



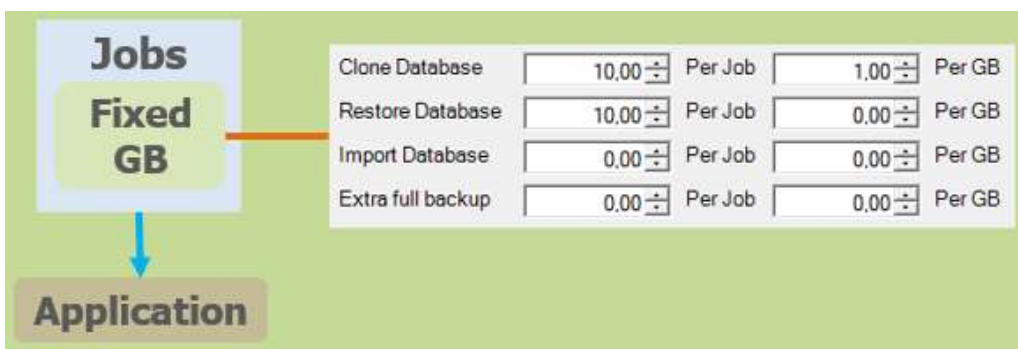
Prices must be specified for all environments. The System Usage will only be used if the System Usage has been defined for the Instance. Note that the prices are with 3 decimals.

## 6.6 Login Prices



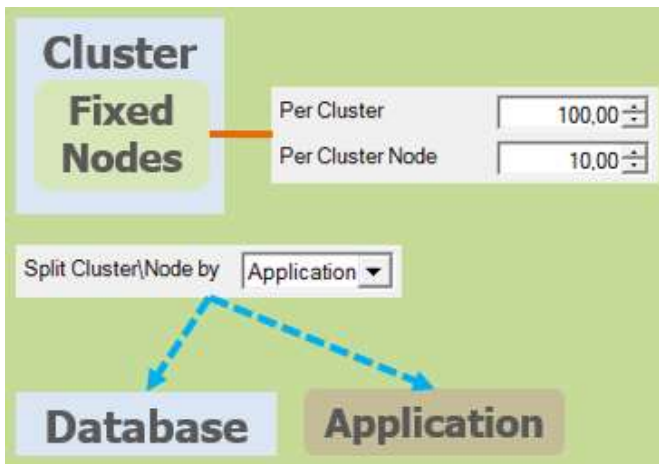
Prices must be specified for all environments. Note that the prices are with 3 decimals.

## 6.7 Jobs Prices



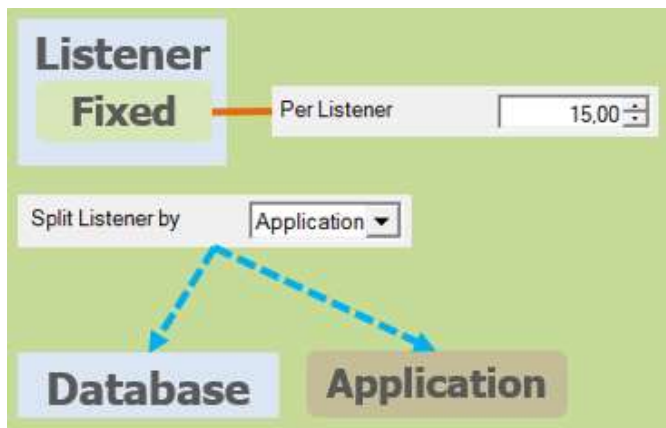
Prices must be specified for all environments. Note that the prices are with 3 decimals.

## 6.8 AlwaysOn – Cluster Prices/Costs



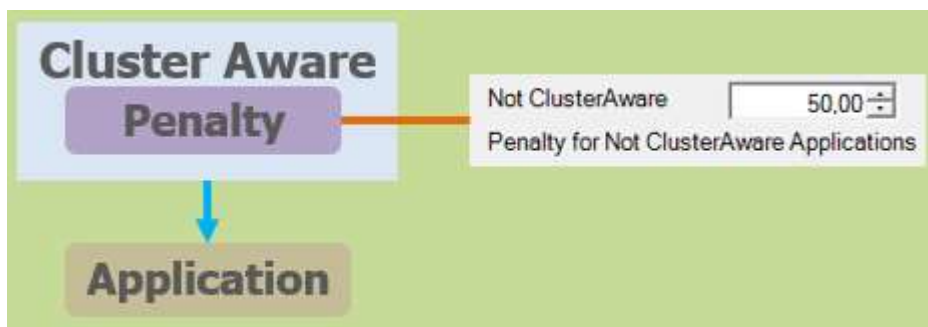
Prices must be specified for all environments. Cluster costs can be split by Database or Application.

## 6.9 AlwaysOn – Listener Prices/Costs



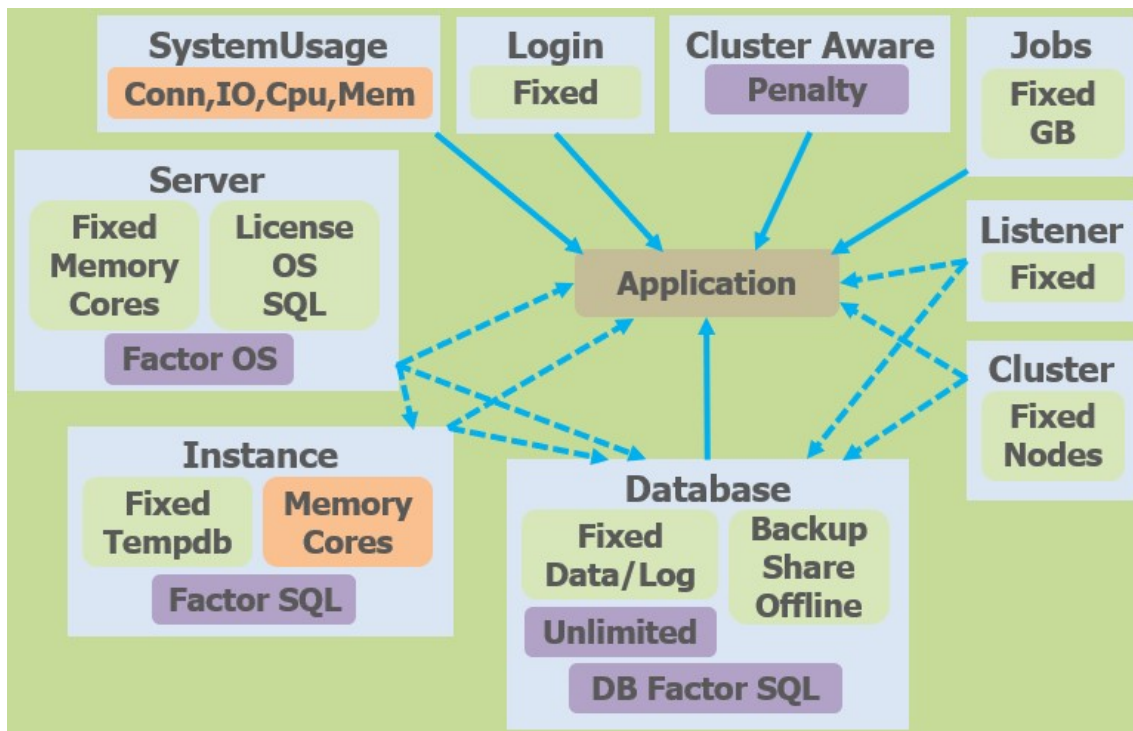
Prices must be specified for all environments. Listener costs can be split by Database or Application.

### 6.10 AlwaysOn – Cluster Aware Penalty



Prices must be specified for all environments. Application is charged with the penalty for each distinct use of listener in all environments.

### 6.11 Prices/Costs & Split by overview



- Penalties **Can be fixed and omitted by changing the Application.**
  
- Memory Cores **Instance Memory/Core costs are only charged if SystemUsage job is not activated for the Instance.**
  
- Conn,IO, Cpu,Mem **Actual SystemUsage might be reduced by improving application (index, etc.)**