

# Runtime data caching

Last Modified on 02/16/2020 9:00 am EST

## Overview

Cora SeQuence runtime data caching can improve performance, scalability, and availability. Caching is especially recommended when a large number of users need to constantly access the same set of data. Caching stores reusable data sets to speed up repeated requests.

Define caching settings for data that is *accessed* frequently, but *does not* change frequently.

## Cache settings

Determine the type of data that is most appropriate to cache. To maximize caching benefits, it is a good practice to analyze usage patterns before you define caching settings.

Property	Description	Considerations
<b>Enable</b>	Determines if caching is enabled or not for the query. This checkbox is not selected by default.	
<b>Name</b>	The name of the query.	
<b>Type</b>	Defines how the system caches data. <ul style="list-style-type: none"><li>• <b>Absolute</b> (default): cached data expires after the specified time interval.</li><li>• <b>Sliding</b>: data that has been accessed is kept in cache for additional time intervals.</li></ul>	Select <b>Absolute</b> for data that does not need to be retrieved often. Select <b>Sliding</b> for data that is retrieved often, but does not change often.
<b>Interval</b> (sec.)	Time, in seconds, during which the data is cached. Minimum value: 1 (second) Default value: 300 (seconds)	Set the interval value carefully. If the interval is too short, the cached data expires too quickly. If the interval is too long, the cached data can become obsolete.
<b>By Parameter</b>	System caches only data relevant to requested parameters. Available for files and lookup tables.	This option saves bandwidth and storage space. When selected, the cache does not store the entire query. It caches only the records related to the requested parameters.

## Define cache settings for queries in the data model

For stored procedures, services, and files, you define caching settings at data model level: **Define Data Model > Advanced Options > Caching** tab

**Data Model Options**

Imports | OData Services | **Caching**

For Lookup table caching, go to the lookup table properties.

Enable	Name	Type	Interval (Sec.)	By Parameter
<input type="checkbox"/>	CustomerDB	Absolute	300	
<input type="checkbox"/>	ProductName	Sliding	300	<input checked="" type="checkbox"/>
<input type="checkbox"/>	usp_SalesResults	Absolute	300	

OK Cancel

### Define cache settings for lookup tables

Because lookup tables can be used for different workflows, you define caching settings at the lookup table level: **Lookup Table Properties > Edit**

**Data Fields** ?

Regions		Name	Type
▶	fldId		Whole Number (Int32)
▶	Name		Text (String)

Add New Field

**Properties**

**General**

(Name) Regions  
 Display Name Regions

**Caching**

By parameters   
 Enabled   
 Interval (Sec.) 300  
 Type Sliding

Switch to Basic Mode

OK Cancel

### Set cache memory size

You configure caching memory size in the `web.config` file. See example below for a **10 MB** memory limit.

The value for the name attribute is **"PNMsoft.Sequence.Data.Caching.EntityMemoryCache"**.

```
...  
Other configuration stuff  
...
```

