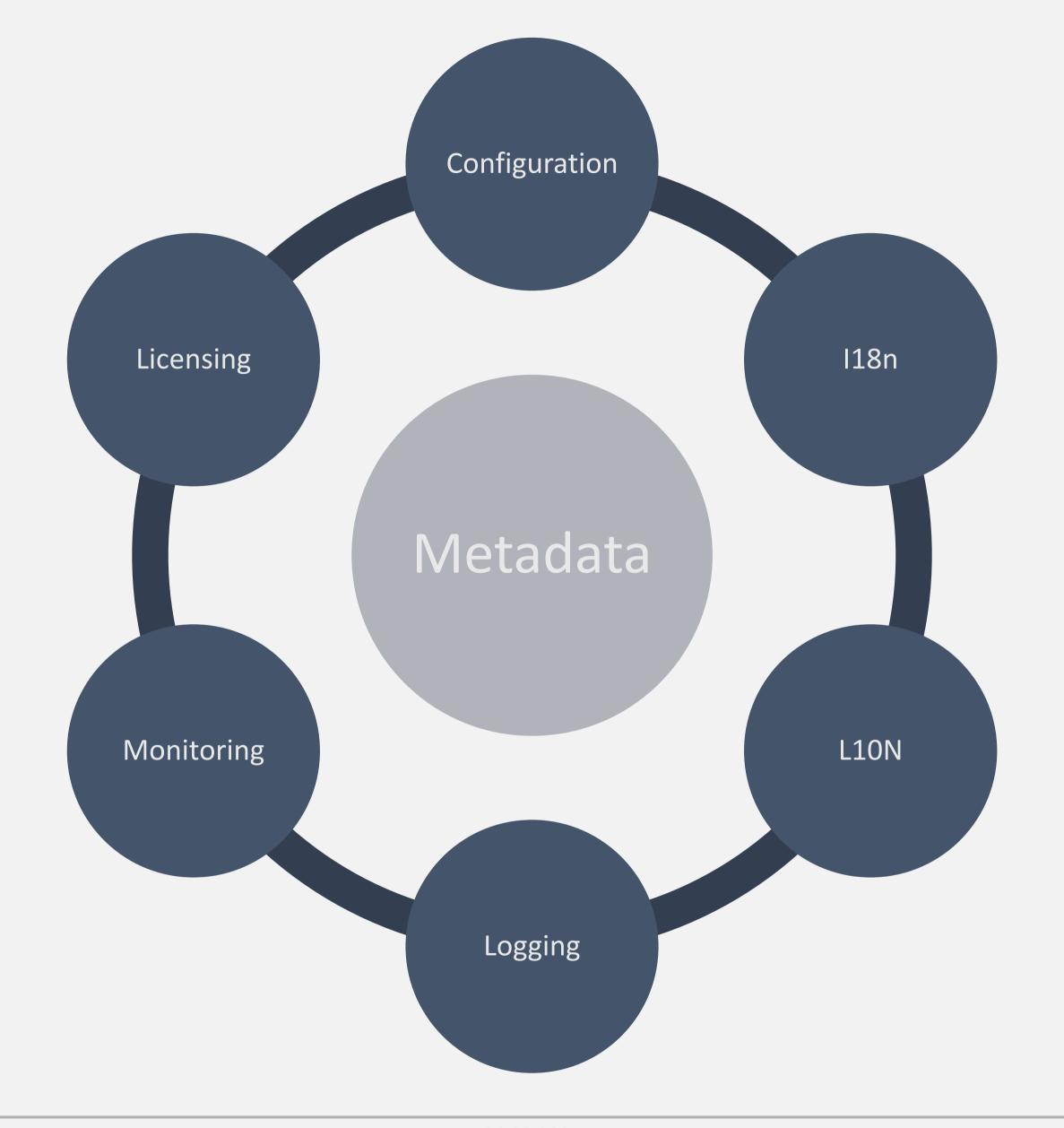
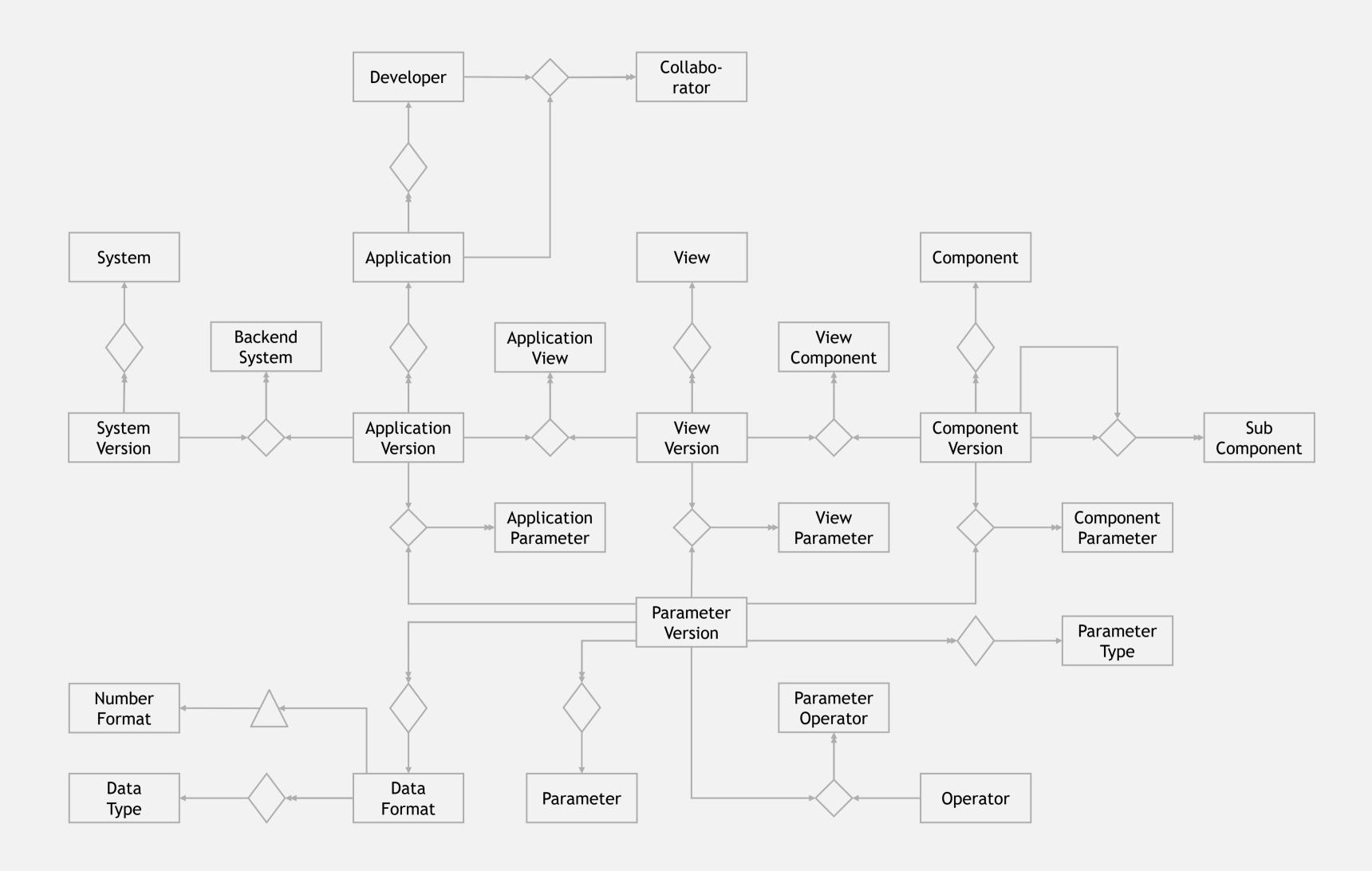


# Appman

One app to rule them all





# Metadata

## Developer

| <u>developerID</u> | firstName* | familyName* | userName* | email*                   | password*                      | phoneNumber   | mobileNumber*  |
|--------------------|------------|-------------|-----------|--------------------------|--------------------------------|---------------|----------------|
| 1                  | Dardan     | Rrafshi     | DonColon  | dardan.rrafshi@gmail.com | \$2y\$11\$SXAXZyioy60hbnymeoJ9 | +497376962198 | +4915738961242 |
| 2                  | Hasan      | Karadeniz   | HKK_57    | hsnkrdnz57@gmail.com     | \$2y\$11\$SXAXZyioy60hbnymeoJ9 | +497376962198 | +4915162472345 |
| 3                  | Maik       | Dürr        | Miauzz    | maik.duerr@gmail.com     | \$2y\$11\$SXAXZyioy60hbnymeoJ9 | +497376962198 | +491749530908  |
| 4                  | Angelina   | Wöll        | Woellang  | woellang@gmail.com       | \$2y\$11\$SXAXZyioy60hbnymeoJ9 | +497376962198 | +491629240356  |

# **Application**

| <u>appID</u> | name*        | description*     | homepageUrl       | repositoryUrl | gitUrl | issueUrl | <u>author</u> * | <u>license</u> * | modifiedBy* | modifiedOn*         |
|--------------|--------------|------------------|-------------------|---------------|--------|----------|-----------------|------------------|-------------|---------------------|
| 1            | Yummy Yogurt | Create your very | https://yummy-yo  | null          | null   | null     | 1               | apache-2.0       | 1           | 2020-10-26 15:30:36 |
| 2            | Vinyl        | My own music     | https://vinyl.com | null          | null   | null     | 1               | apache-2.0       | 1           | 2020-10-26 15:30:45 |
| 3            | Sitt         | Stay hydrated    | https://sitt.com  | null          | null   | null     | 1               | apache-2.0       | 2           | 2020-10-26 15:30:50 |
| 4            | Machine Care | Care for it      | https://machine   | null          | null   | null     | 1               | apache-2.0       | 3           | 2020-10-26 15:30:55 |

## **ApplicationVersion**

| <u>app</u> | version | <u>addedBy</u> * | addedOn*            |
|------------|---------|------------------|---------------------|
| 1          | 1.0.0   | 1                | 2020-10-26 15:30:36 |
| 1          | 1.1.0   | 1                | 2020-10-26 15:30:36 |
| 1          | 1.1.5   | 1                | 2020-10-26 15:30:36 |
| 2          | 1.0.0   | 1                | 2020-10-26 15:30:36 |

#### System

| <u>systemID</u> | name*         | description*              | docUrl | modifiedBy* | modifiedOn*         |
|-----------------|---------------|---------------------------|--------|-------------|---------------------|
| 1               | MySQL         | An open-source relation   | null   | 1           | 2020-10-26 15:30:36 |
| 2               | MongoDB       | A document-based data     | null   | 1           | 2020-10-26 15:30:45 |
| 3               | Apache Tomcat | An open-source web        | null   | 2           | 2020-10-26 15:30:50 |
| 4               | Wildfly       | An JEE application server | null   | 3           | 2020-10-26 15:30:55 |

## **SystemVersion**

| <u>system</u> | version | <u>addedBy</u> * | addedOn*            |
|---------------|---------|------------------|---------------------|
| 1             | 1.0.0   | 1                | 2020-10-26 15:30:36 |
| 1             | 1.1.0   | 1                | 2020-10-26 15:30:36 |
| 1             | 1.1.5   | 1                | 2020-10-26 15:30:36 |
| 2             | 1.0.0   | 1                | 2020-10-26 15:30:36 |

## BackendSystem

| <u>app</u> | <u>appVersion</u> | <u>system</u> | <u>systemVersion</u> | <u>addedBy</u> * | addedOn*            |
|------------|-------------------|---------------|----------------------|------------------|---------------------|
| 1          | 1.0.0             | 1             | 1.0.0                | 1                | 2020-10-26 15:30:36 |
| 1          | 1.0.0             | 3             | 1.0.0                | 1                | 2020-10-26 15:30:36 |
| 2          | 1.0.0             | 1             | 1.0.0                | 1                | 2020-10-26 15:30:36 |
| 2          | 1.0.0             | 3             | 1.0.0                | 1                | 2020-10-26 15:30:36 |

#### Collaborator

| <u>developer</u> | арр |
|------------------|-----|
| 2                | 1   |
| 2                | 2   |
| 2                | 3   |
| 3                | 1   |

# Metadata

#### View

| <u>viewID</u> | name*        | description*                           | route*                 | modifiedBy* | modifiedOn*         |
|---------------|--------------|--|------------------------|-------------|---------------------|
| 1             | Log In Form  | A login view                           | /login                 | 1           | 2020-10-26 15:30:36 |
| 2             | Playlist     | Displays the information of a playlist | /playlist/{playlistID} | 1           | 2020-10-26 15:30:45 |
| 3             | Sign Up Form | A sign up view                         | /signup                | 1           | 2020-10-26 15:30:50 |
| 4             | Mixer        | A view to configure a frozen yogurt    | /mixer                 | 2           | 2020-10-26 15:30:55 |

#### ViewVersion

| <u>view</u> | <u>version</u> | <u>addedBy</u> * | addedOn*            |
|-------------|----------------|------------------|---------------------|
| 1           | 1.0.0          | 1                | 2020-10-26 15:30:36 |
| 1           | 1.1.0          | 1                | 2020-10-26 15:30:36 |
| 2           | 1.0.0          | 1                | 2020-10-26 15:30:36 |
| 3           | 1.0.0          | 1                | 2020-10-26 15:30:36 |

## Component

| <u>componentID</u> | name*               | description*                          | <u>modifiedBy</u> * | modifiedOn*         |
|--------------------|---------------------|---------------------------------------|---------------------|---------------------|
| 1                  | Track List          | Display information about tracks      | 1                   | 2020-10-26 15:30:36 |
| 2                  | Player Control      | A component to control a music player | 1                   | 2020-10-26 15:30:45 |
| 3                  | Volume Bar          | A component to set the volume         | 1                   | 2020-10-26 15:30:50 |
| 4                  | Ingredient Selector | A component to select an ingredient   | 1                   | 2020-10-26 15:30:55 |

## ComponentVersion

| <u>component</u> | <u>version</u> | <u>addedBy</u> * | addedOn*            |
|------------------|----------------|------------------|---------------------|
| 1                | 1.0.0          | 1                | 2020-10-26 15:30:36 |
| 2                | 1.0.0          | 1                | 2020-10-26 15:30:36 |
| 3                | 1.0.0          | 1                | 2020-10-26 15:30:36 |
| 4                | 1.0.0          | 1                | 2020-10-26 15:30:36 |

## **ApplicationView**

| <u>app</u> | <u>appVersion</u> | <u>view</u> | <u>viewVersion</u> | <u>addedBy</u> * | addedOn*            |
|------------|-------------------|-------------|--------------------|------------------|---------------------|
| 1          | 1.0.0             | 1           | 1.0.0              | 1                | 2020-10-26 15:30:36 |
| 2          | 1.1.0             | 1           | 1.1.0              | 1                | 2020-10-26 15:30:36 |

## ViewComponent

| <u>view</u> | <u>viewVersion</u> | <u>component</u> | <u>componentVersion</u> | <u>addedBy</u> * | addedOn*            |
|-------------|--------------------|------------------|-------------------------|------------------|---------------------|
| 2           | 1.0.0              | 1                | 1.0.0                   | 1                | 2020-10-26 15:30:36 |
| 2           | 1.1.0              | 2                | 1.0.0                   | 1                | 2020-10-26 15:30:36 |

## SubComponent

| <u>component</u> | <u>componentVersion</u> | <u>subComponent</u> | <u>subComponentVersion</u> | <u>addedBy</u> * | addedOn*            |
|------------------|-------------------------|---------------------|----------------------------|------------------|---------------------|
| 2                | 1.0.0                   | 3                   | 1.0.0                      | 1                | 2020-10-26 15:30:36 |
| 2                | 1.1.0                   | 3                   | 1.1.0                      | 1                | 2020-10-26 15:30:36 |

#### **Parameter**

| <u>parameterID</u> | name*           | description*                       | modifiedBy* | modifiedOn*         |
|--------------------|-----------------|------------------------------------|-------------|---------------------|
| 1                  | databaseUrl     | The host url of the database       | 1           | 2020-10-26 15:30:36 |
| 2                  | userName        | The user name of a system          | 1           | 2020-10-26 15:30:36 |
| 3                  | sortBy          | Sort a list by a criteria          | 1           | 2020-10-26 15:30:36 |
| 4                  | backgroundColor | The background color of an element | 1           | 2020-10-26 15:30:36 |

## **ParameterType**

| typeID | name*                   | modifiedBy* | modifiedOn*         |
|--------|-------------------------|-------------|---------------------|
| 1      | Filter parameter        | 1           | 2020-10-26 15:30:36 |
| 2      | Sort parameter          | 1           | 2020-10-26 15:30:36 |
| 3      | Styling parameter       | 1           | 2020-10-26 15:30:36 |
| 4      | Configuration parameter | 1           | 2020-10-26 15:30:36 |

#### **ParameterVersion**

| <u>parameter</u> | <u>version</u> | isArray* | has Value Help* | <u>format</u> * | <u>type</u> * | modifiedBy* | modifiedOn*         |
|------------------|----------------|----------|-----------------|-----------------|---------------|-------------|---------------------|
| 1                | 1.0.0          | 0        | 0               | 1               | 4             | 1           | 2020-10-26 15:30:36 |
| 1                | 1.1.0          | 0        | 0               | 5               | 4             | 1           | 2020-10-26 15:30:36 |
| 2                | 1.0.0          | 0        | 1               | 1               | 2             | 1           | 2020-10-26 15:30:36 |
| 4                | 1.0.0          | 0        | 1               | 7               | 3             | 1           | 2020-10-26 15:30:36 |

# DataType

| typeID | name*   |
|--------|---------|
| 1      | string  |
| 2      | decimal |
| 3      | integer |
| 4      | boolean |

#### **DataFormat**

| <u>formatID</u> | name*     | format* | <u>type*</u> |
|-----------------|-----------|---------|--------------|
| 1               | none      | .*      | 1            |
| 2               | date      |         | 1            |
| 3               | time      |         | 1            |
| 4               | date-time |         | 1            |
| 5               | uri       |         | 1            |
| 6               | email     |         | 1            |
| 7               | hostname  |         | 1            |
| 8               | ipv4      |         | 1            |
| 9               | ipv6      |         | 1            |
| 10              | uuid      |         | 1            |
| 11              | float     |         | 2            |

#### **NumberFormat**

| <u>formatID</u> | min*   | max*  |
|-----------------|--------|-------|
| 13              | -128   | 127   |
| 14              | 0      | 255   |
| 15              | -32768 | 32767 |
| 16              | 0      | 65535 |

## Operator

| <u>operatorID</u> | name*       | inputNumber* |
|-------------------|-------------|--------------|
| EQ                | Equals      | 1            |
| ВТ                | Between     | 2            |
| NE                | Not equals  | 1            |
| SW                | Starts with | 1            |

## **ParameterOperator**

| <u>parameter</u> | <u>parameterVersion</u> | <u>operator</u> | <u>addedBy</u> * | addedOn*            |
|------------------|-------------------------|-----------------|------------------|---------------------|
| 1                | 1.0.0                   | EQ              | 1                | 2020-10-26 15:30:36 |
| 2                | 1.0.0                   | EQ              | 1                | 2020-10-26 15:30:36 |
| 2                | 1.0.0                   | ВТ              | 1                | 2020-10-26 15:30:36 |
| 2                | 1.0.0                   | SW              | 1                | 2020-10-26 15:30:36 |

# Metadata

# ApplicationParameter

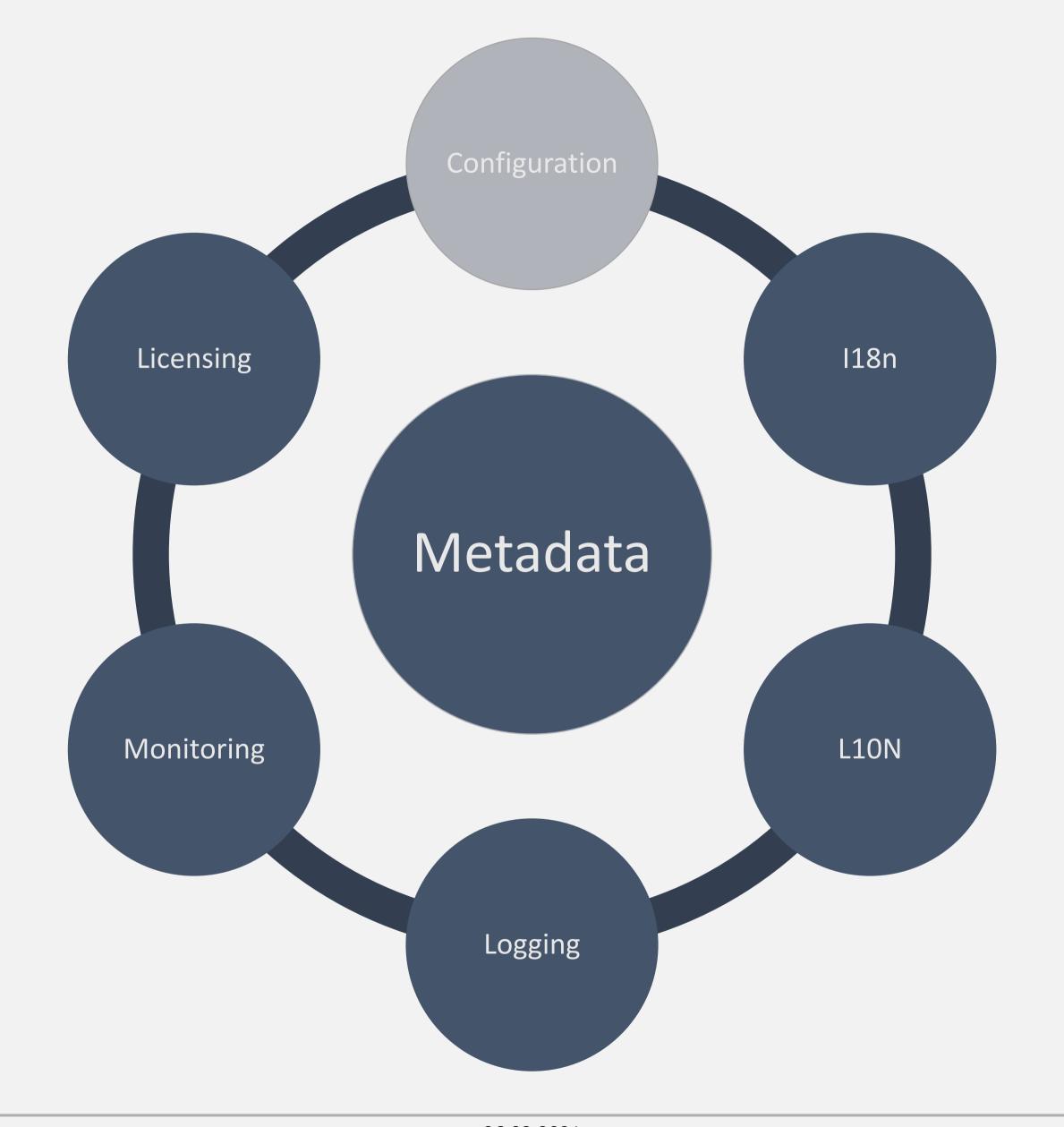
| <u>арр</u> | <u>appVersion</u> | <u>parameter</u> | <u>parameterVersion</u> | required* | <u>modifiedBy</u> * | modifiedOn*         |
|------------|-------------------|------------------|-------------------------|-----------|---------------------|---------------------|
| 2          | 1.1.0             | 1                | 1.1.0                   | 1         | 1                   | 2020-10-26 15:30:36 |
| 2          | 1.1.0             | 2                | 1.0.0                   | 1         | 1                   | 2020-10-26 15:30:36 |
| 1          | 1.0.0             | 1                | 1.1.0                   | 1         | 1                   | 2020-10-26 15:30:36 |
| 1          | 1.0.0             | 2                | 1.0.0                   | 1         | 1                   | 2020-10-26 15:30:36 |

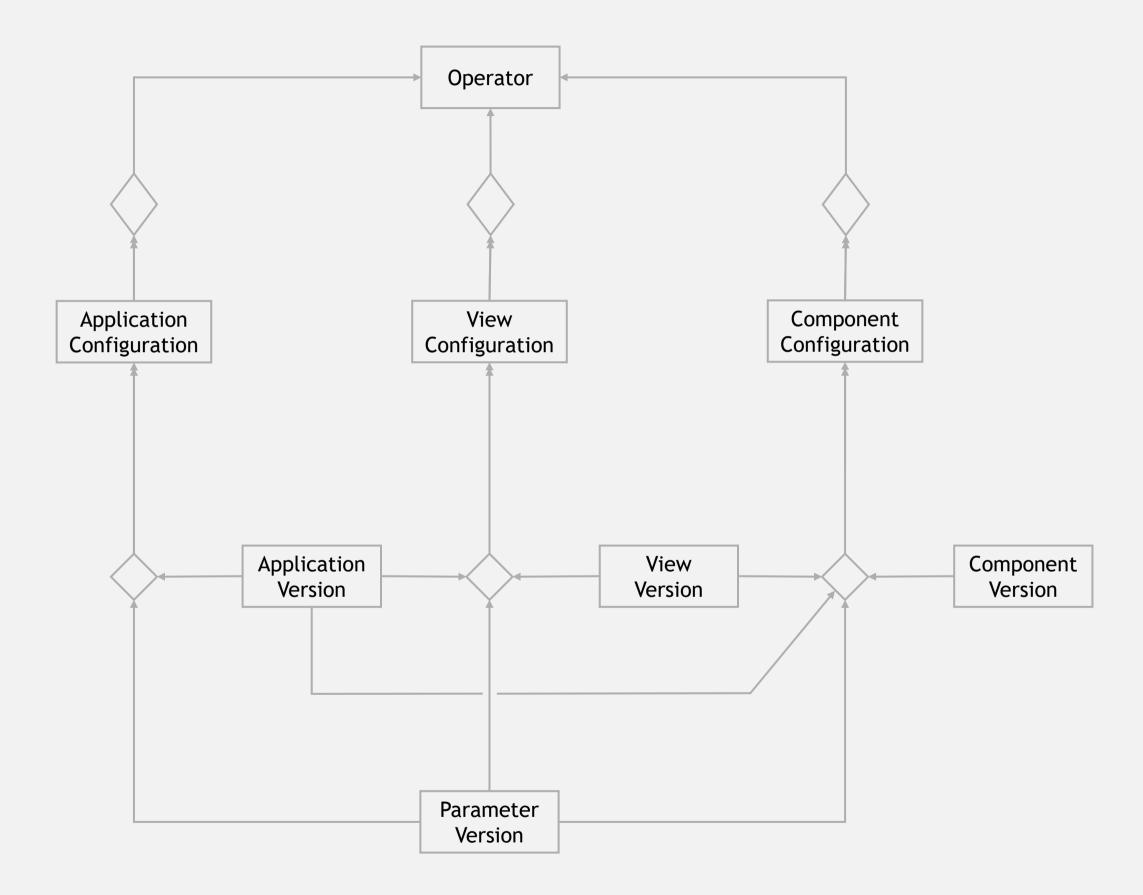
#### ViewParameter

| <u>view</u> | <u>viewVersion</u> | <u>parameter</u> | <u>parameterVersion</u> | required* | modifiedBy* | modifiedOn*         |
|-------------|--------------------|------------------|-------------------------|-----------|-------------|---------------------|
| 2           | 1.0.0              | 4                | 1.0.0                   | 1         | 1           | 2020-10-26 15:30:36 |
| 2           | 1.1.0              | 4                | 1.0.0                   | 0         | 1           | 2020-10-26 15:30:36 |
| 4           | 1.0.0              | 4                | 1.0.0                   | 0         | 1           | 2020-10-26 15:30:36 |
| 4           | 1.1.0              | 4                | 1.0.0                   | 1         | 1           | 2020-10-26 15:30:36 |

# ComponentParameter

| <u>component</u> | <u>componentVersion</u> | <u>parameter</u> | <u>parameterVersion</u> | required* | modifiedBy* | modifiedOn*         |
|------------------|-------------------------|------------------|-------------------------|-----------|-------------|---------------------|
| 1                | 1.0.0                   | 3                | 1.0.0                   | 1         | 1           | 2020-10-26 15:30:36 |
| 1                | 1.0.0                   | 4                | 1.0.0                   | 0         | 1           | 2020-10-26 15:30:36 |
| 4                | 1.0.0                   | 4                | 1.0.0                   | 0         | 1           | 2020-10-26 15:30:36 |
| 4                | 1.1.0                   | 4                | 1.0.0                   | 1         | 1           | 2020-10-26 15:30:36 |





# Configuration

## **ApplicationConfiguration**

| <u>app</u> | <u>appVersion</u> | <u>parameter</u> | <u>parameterVersion</u> | <u>sequence</u> | operator* | value*                            | other | <u>modifiedBy</u> * | modifiedOn*         |
|------------|-------------------|------------------|-------------------------|-----------------|-----------|-----------------------------------|-------|---------------------|---------------------|
| 2          | 1.1.0             | 1                | 1.1.0                   | 1               | EQ        | jdbc:mysql://localhost:3306/vinyl | null  | 1                   | 2020-10-26 15:30:36 |
| 2          | 1.1.0             | 2                | 1.0.0                   | 1               | EQ        | rrafshda                          | null  | 1                   | 2020-10-26 15:30:36 |
| 1          | 1.0.0             | 1                | 1.1.0                   | 1               | EQ        | jdbc:mysql://localhost:3306/vinyl | null  | 1                   | 2020-10-26 15:30:36 |
| 1          | 1.0.0             | 2                | 1.0.0                   | 1               | EQ        | root                              | null  | 1                   | 2020-10-26 15:30:36 |

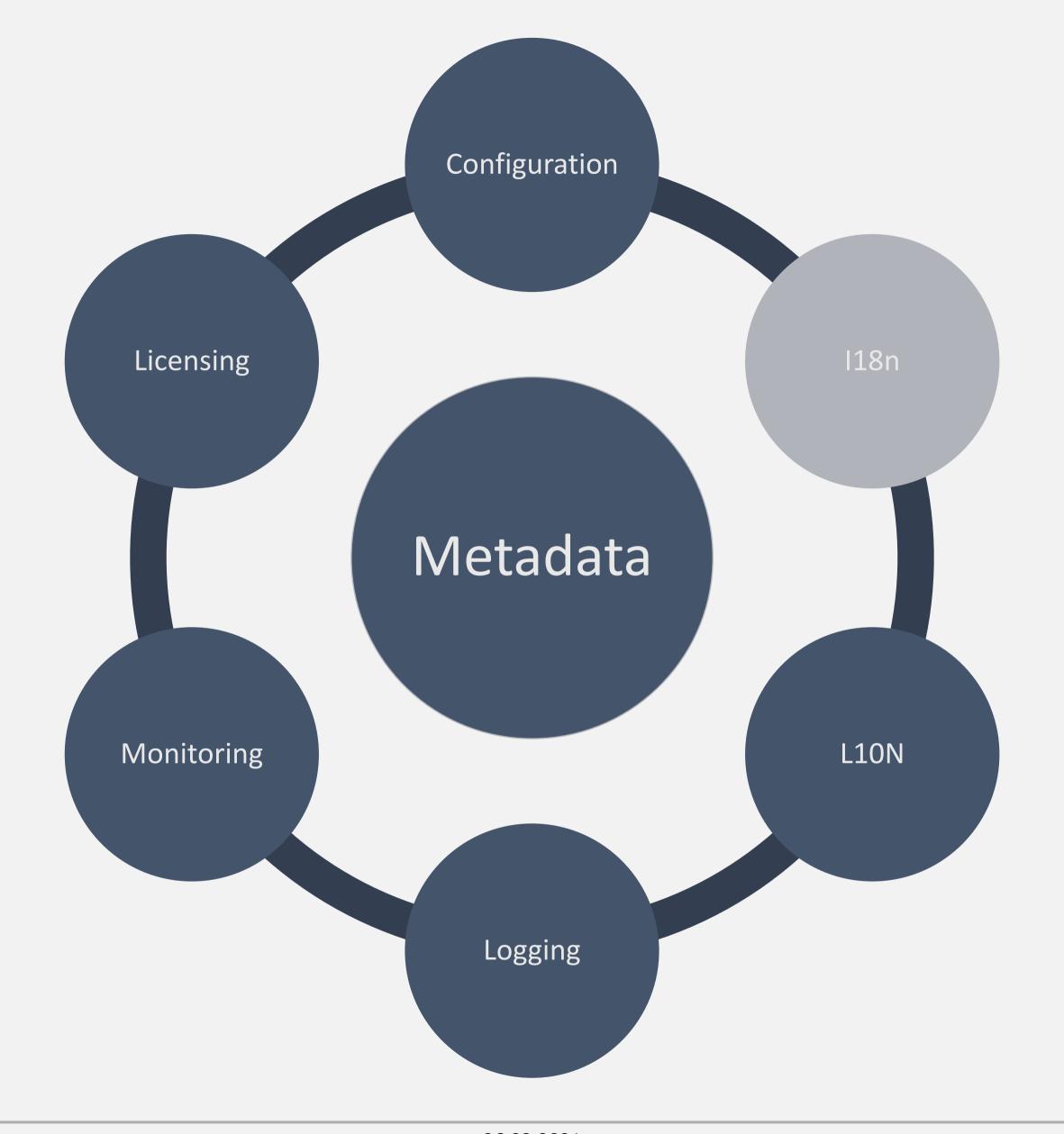
#### ViewConfiguration

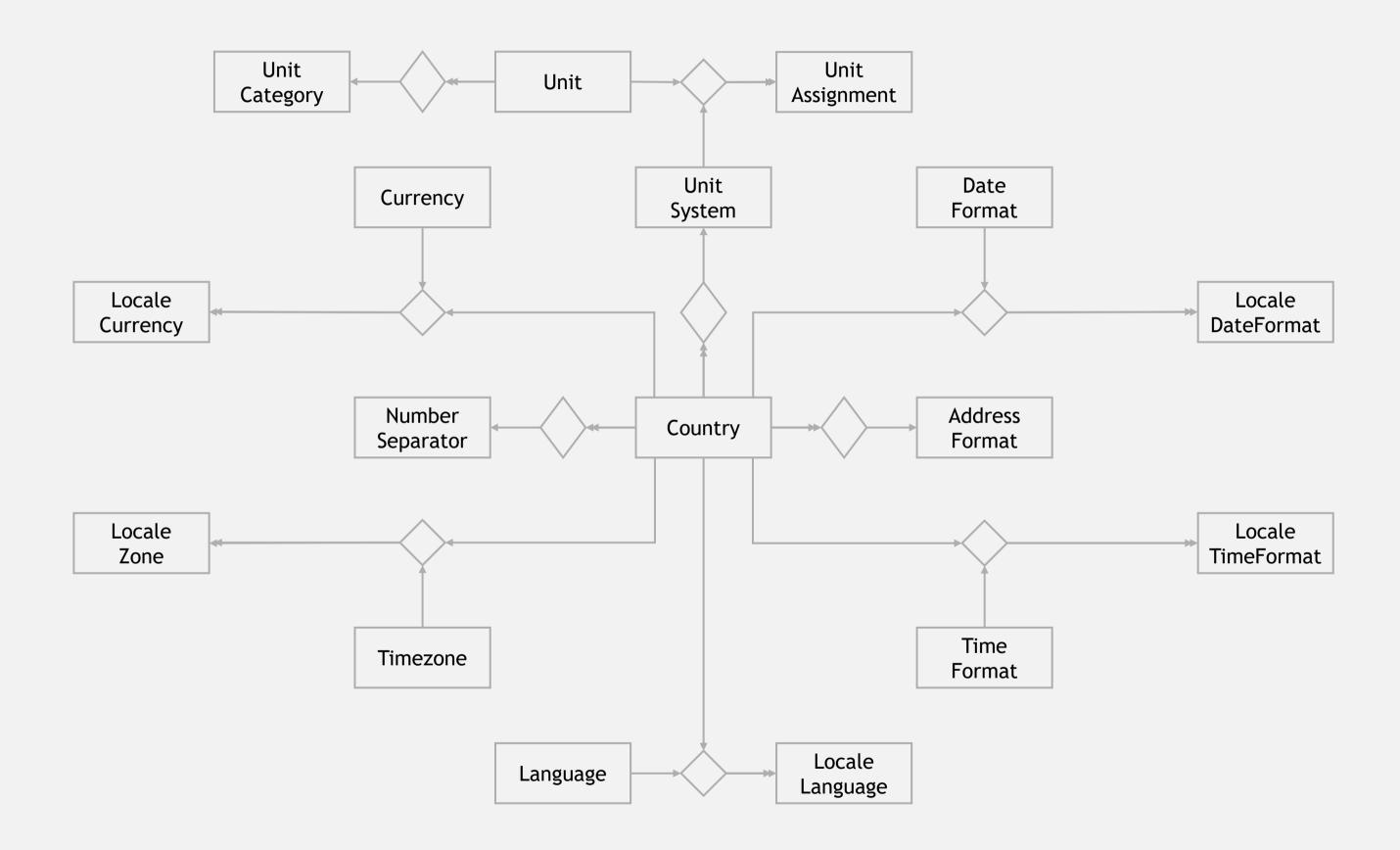
| арр | <u>appVersion</u> | <u>view</u> | <u>viewVersion</u> | <u>parameter</u> | <u>parameterVersion</u> | <u>sequence</u> | operator* | value*  | other | modifiedBy* | modifiedOn*         |
|-----|-------------------|-------------|--------------------|------------------|-------------------------|-----------------|-----------|---------|-------|-------------|---------------------|
| 2   | 1.0.0             | 2           | 1.0.0              | 4                | 1.0.0                   | 1               | EQ        | #44546A | null  | 1           | 2020-10-26 15:30:36 |
| 2   | 1.1.0             | 2           | 1.1.0              | 4                | 1.0.0                   | 1               | EQ        | #203864 | null  | 1           | 2020-10-26 15:30:36 |
| 1   | 1.0.0             | 4           | 1.0.0              | 4                | 1.0.0                   | 1               | EQ        | #44546A | null  | 1           | 2020-10-26 15:30:36 |
| 1   | 1.1.0             | 4           | 1.1.0              | 4                | 1.0.0                   | 1               | EQ        | #203864 | null  | 1           | 2020-10-26 15:30:36 |

# ComponentConfiguration

| <u>app</u> | <u>appVersion</u> | <u>view</u> | <u>viewVersion</u> | <u>component</u> | <u>componentVersion</u> | <u>parameter</u> | <u>parameterVersion</u> | <u>sequence</u> | <u>operator</u> * | value*  | other | <u>modifiedBy</u> * | modifiedOn*         |
|------------|-------------------|-------------|--------------------|------------------|-------------------------|------------------|-------------------------|-----------------|-------------------|---------|-------|---------------------|---------------------|
| 2          | 1.0.0             | 2           | 1.0.0              | 1                | 1.0.0                   | 3                | 1.0.0                   | 1               | EQ                | artist  | null  | 1                   | 2020-10-26 15:30:36 |
| 2          | 1.0.0             | 2           | 1.0.0              | 1                | 1.0.0                   | 4                | 1.0.0                   | 1               | EQ                | #44546A | null  | 1                   | 2020-10-26 15:30:36 |
| 1          | 1.0.0             | 4           | 1.0.0              | 4                | 1.0.0                   | 4                | 1.0.0                   | 1               | EQ                | #203864 | null  | 1                   | 2020-10-26 15:30:36 |
| 1          | 1.0.0             | 4           | 1.0.0              | 4                | 1.0.0                   | 4                | 1.0.0                   | 1               | EQ                | #203864 | null  | 1                   | 2020-10-26 15:30:36 |

■ For the operators "Between" and "Not between" the value column must be less equal than the other column.





# Internationalization

#### Country

| <u>code</u> | key* | name*          | dialingCode* | <u>addressFormat</u> * | <u>numberSeparator</u> * | <u>unitSystem</u> * |
|-------------|------|----------------|--------------|------------------------|--------------------------|---------------------|
| DE          | DEU  | Germany        | +49          | 1                      | 1                        | 1                   |
| US          | USA  | United States  | +1           | 2                      | 2                        | 2                   |
| GB          | GBR  | United Kingdom | +44          | 3                      | 2                        | 2                   |
| CH          | CHE  | Switzerland    | +41          | 4                      | 3                        | 1                   |

## UnitSystem

| <u>systemID</u> | name*     |
|-----------------|-----------|
| 1               | metric    |
| 2               | imperial  |
| 3               | customary |
|                 |           |

## UnitAssignment

| <u>system</u> | <u>unit</u> |
|---------------|-------------|
| 1             | 1           |
| 1             | 2           |
| 1             | 3           |
| 1             | 4           |

#### Unit

| <u>unitID</u> | name*      | abbreviation* | factor* | offset* | <u>category</u> * |
|---------------|------------|---------------|---------|---------|-------------------|
| 1             | Kilometer  | km            | 1000    | 0       | 1                 |
| 2             | Hectometer | hm            | 100     | 0       | 1                 |
| 3             | Meter      | m             | 1       | 0       | 1                 |
| 4             | Decimeter  | dm            | 0.1     | 0       | 1                 |

## **UnitCategory**

| <u>categoryID</u> | name*        |
|-------------------|--------------|
| 1                 | Length       |
| 2                 | Force        |
| 3                 | Speed        |
| 4                 | Acceleration |

#### AddressFormat

| <u>formatID</u> | format*  |
|-----------------|----------|
| 1               | Format 1 |
| 2               | Format 2 |
| 3               | Format 3 |
| 4               | Format 4 |

## NumberSeparator

| <u>separatorID</u> | thousandSeparator* | decimalSeparator* |
|--------------------|--------------------|-------------------|
| 1                  | ,                  |                   |
| 2                  | •                  | ,                 |
| 3                  | ,                  | `                 |
| 4                  |                    | `                 |

#### **Currency**

| <u>code</u> | digitalCode* | name*                | symbol* |
|-------------|--------------|----------------------|---------|
| EUR         | 978          | European Euro        | €       |
| USD         | 840          | United States Dollar | \$      |
| GBP         | 826          | Britisch Pound       | £       |
| CHF         | 756          | Swiss Franc          | Fr      |

## LocaleCurrency

| <u>country</u> | <u>currency</u> |
|----------------|-----------------|
| DE             | EUR             |
| US             | USD             |
| GB             | GBP             |
| СН             | CHF             |

# Internationalization

#### **DateFormat**

| <u>formatID</u> | format*    |
|-----------------|------------|
| 1               | DD.MM.YYYY |
| 2               | DD/MM/YYYY |
| 3               | MM/DD/YYYY |
| 4               | YYYYMMDD   |

#### LocaleDateFormat

| <u>country</u> | <u>format</u> | displayStyle* |
|----------------|---------------|---------------|
| DE             | 1             | medium        |
| GB             | 2             | medium        |
| US             | 3             | medium        |
| СН             | 4             | medium        |

#### **TimeFormat**

| ı | <u>formatID</u> | format*      |
|---|-----------------|--------------|
|   | 1               | HH:mm:ss     |
|   | 2               | HH:mm        |
|   | 3               | HH:mm:ss.SSS |
|   | 4               |              |

#### LocaleTimeFormat

| <u>country</u> | <u>format</u> | displayStyle* |
|----------------|---------------|---------------|
| DE             | 1             | medium        |
| GB             | 2             | medium        |
| US             | 3             | medium        |
| СН             | 4             | medium        |

#### Timezone

| <u>zoneID</u> | name*            | offset* | offsetDST* |
|---------------|------------------|---------|------------|
| 1             | Europe/Berlin    | +01:00  | +02:00     |
| 2             | Europe/Brussels  | +01:00  | +02:00     |
| 3             | Europe/Bucharest | +02:00  | +03:00     |
| 4             | Europe/Budapest  | +01:00  | +02:00     |

## LocaleTimezone

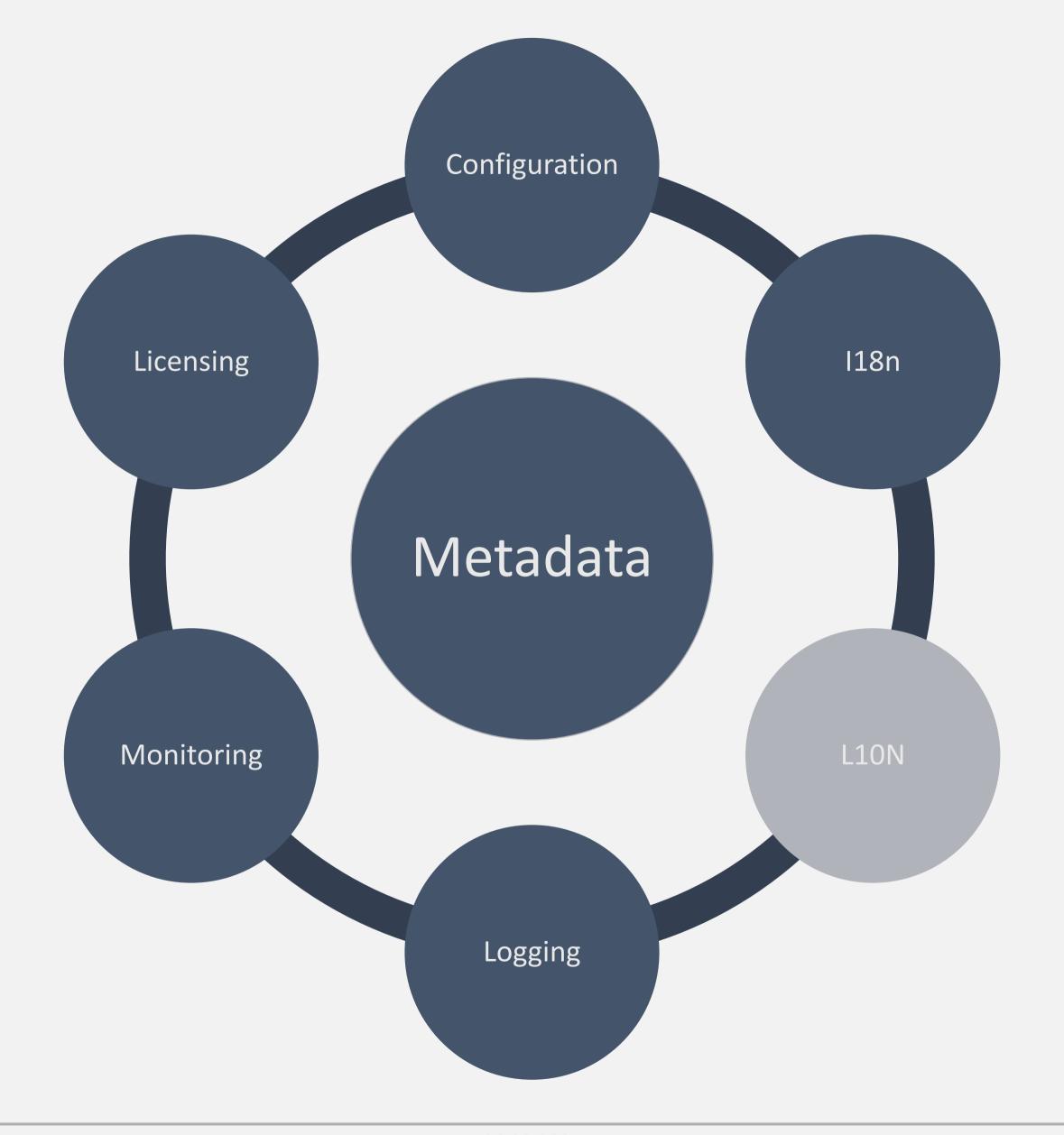
| <u>country</u> | <u>timezone</u> |
|----------------|-----------------|
| DE             | 1               |
| GB             | 2               |
| US             | 3               |
| СН             | 4               |

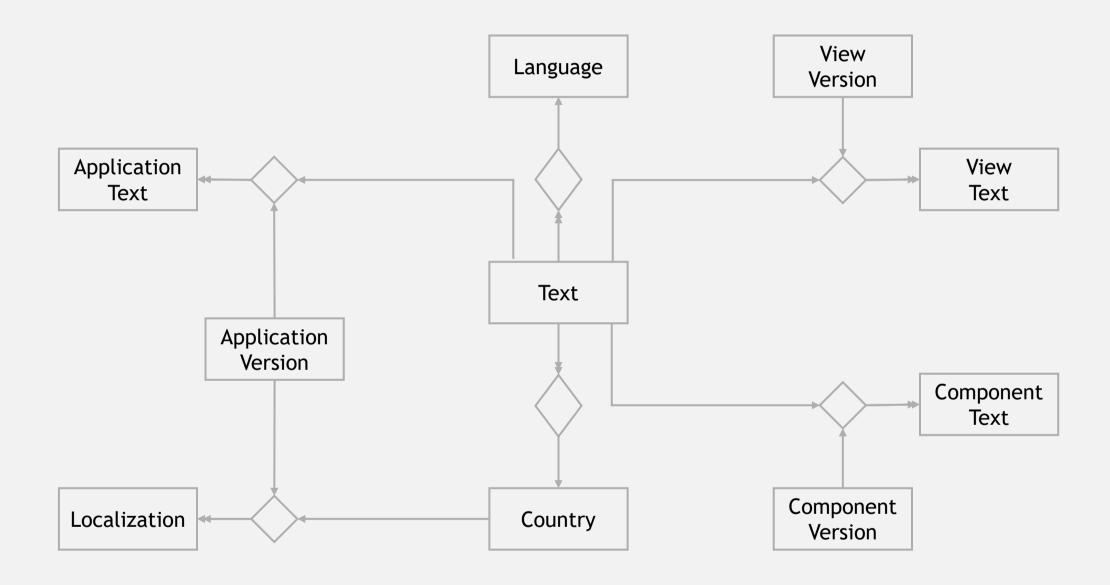
#### Language

| <u>code</u> | name*   | nativeName* |
|-------------|---------|-------------|
| de          | German  | Deutsch     |
| en          | English | English     |
| fr          | French  | français    |
| es          | Spanish | español     |

## LocaleLanguage

| <u>country</u> | <u>language</u> | isOfficial* |
|----------------|-----------------|-------------|
| DE             | de              | 1           |
| US             | en              | 1           |
| GB             | en              | 1           |
| СН             | de              | 1           |





# Localization

#### **Text**

| <u>textID</u> | <u>country</u> | <u>language</u> | short             | medium | large | <u>modifiedBy</u> * | modifiedOn*         |
|---------------|----------------|-----------------|-------------------|--------|-------|---------------------|---------------------|
| back          | DE             | de              | Zurück            | null   | null  | 1                   | 2020-10-26 15:30:36 |
| back          | US             | en              | Back              | null   | null  | 1                   | 2020-10-26 15:30:36 |
| back          | ES             | es              | Volver            | null   | null  | 1                   | 2020-10-26 15:30:36 |
| cancel        | DE             | de              | Abbrechen         | null   | null  | 1                   | 2020-10-26 15:30:36 |
| cancel        | US             | en              | Cancel            | null   | null  | 1                   | 2020-10-26 15:30:36 |
| cancel        | ES             | es              | Cancelar          | null   | null  | 1                   | 2020-10-26 15:30:36 |
| userName      | DE             | de              | Benutzername      | null   | null  | 1                   | 2020-10-26 15:30:36 |
| userName      | US             | en              | User name         | null   | null  | 1                   | 2020-10-26 15:30:36 |
| userName      | ES             | es              | Nombre de usuario | null   | null  | 1                   | 2020-10-26 15:30:36 |
| password      | DE             | de              | Passwort          | null   | null  | 1                   | 2020-10-26 15:30:36 |
| password      | US             | en              | Password          | null   | null  | 1                   | 2020-10-26 15:30:36 |

**ApplicationText** 

| <u>app</u> | <u>appVersion</u> | <u>text</u> | <u>country</u> | <u>language</u> | <u>addedBy</u> * | addedOn*            |
|------------|-------------------|-------------|----------------|-----------------|------------------|---------------------|
| 1          | 1.0.0             | back        | DE             | de              | 1                | 2020-10-26 15:30:36 |
| 1          | 1.0.0             | back        | US             | en              | 1                | 2020-10-26 15:30:36 |
| 1          | 1.0.0             | back        | ES             | es              | 1                | 2020-10-26 15:30:36 |
| 1          | 1.0.0             | cancel      | DE             | de              | 1                | 2020-10-26 15:30:36 |

ViewText

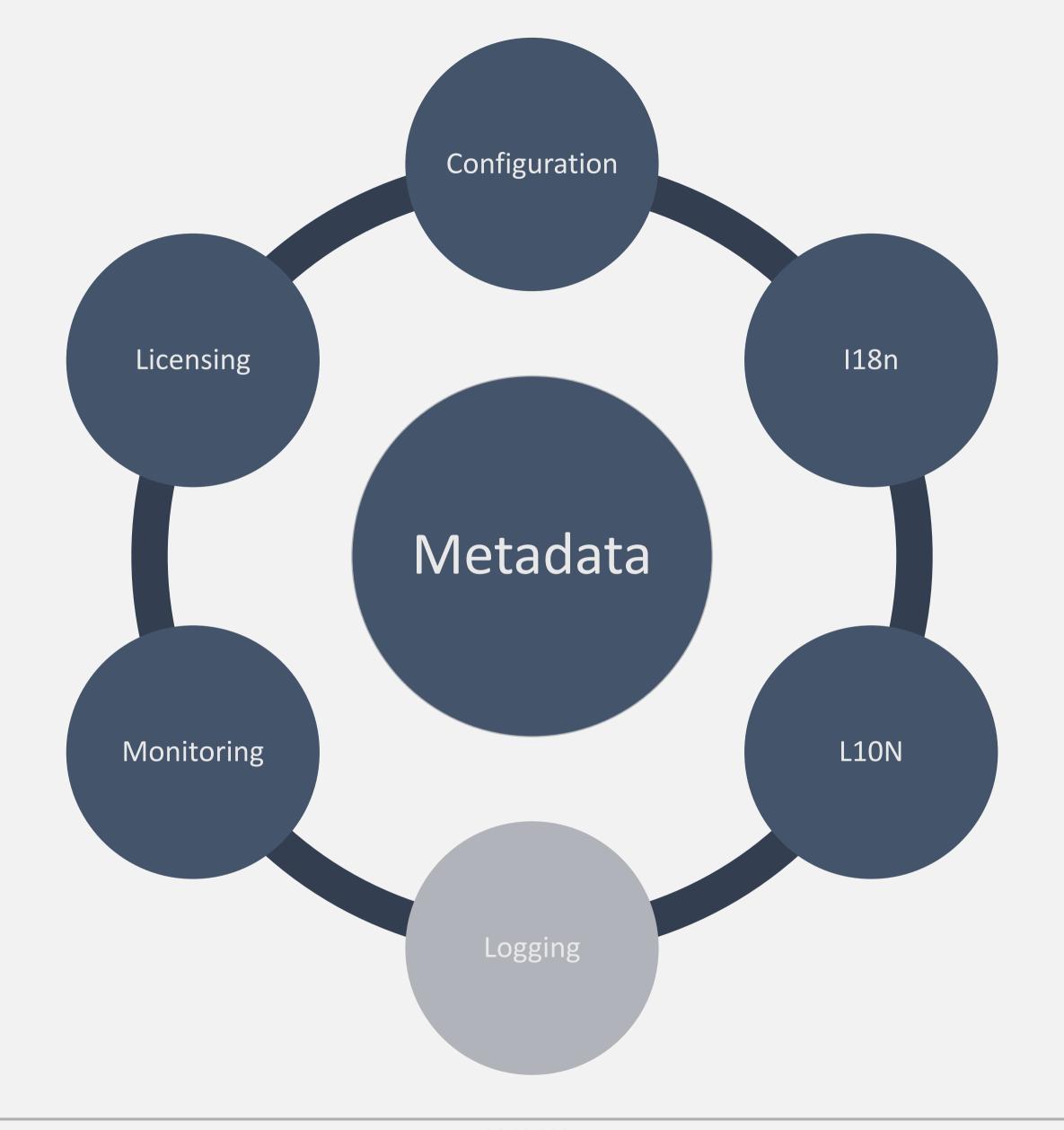
| <u>view</u> | <u>viewVersion</u> | <u>text</u> | <u>country</u> | <u>language</u> | <u>addedBy</u> * | addedOn*            |
|-------------|--------------------|-------------|----------------|-----------------|------------------|---------------------|
| 1           | 1.0.0              | userName    | DE             | de              | 1                | 2020-10-26 15:30:36 |
| 1           | 1.0.0              | userName    | US             | en              | 1                | 2020-10-26 15:30:36 |
| 1           | 1.0.0              | userName    | ES             | es              | 1                | 2020-10-26 15:30:36 |
| 1           | 1.0.0              | password    | DE             | de              | 1                | 2020-10-26 15:30:36 |

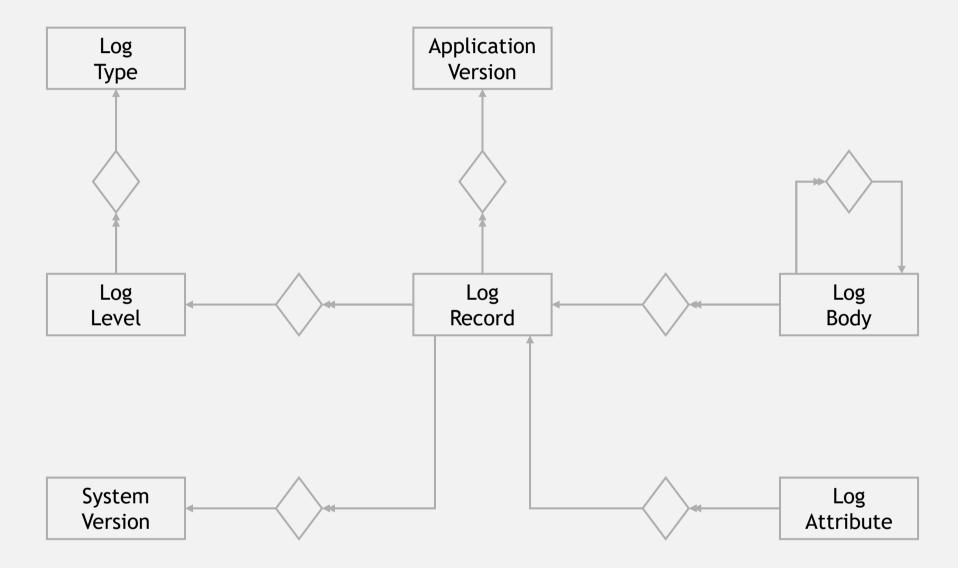
ComponentText

| <u>component</u> | <u>componentVersion</u> | <u>text</u> | <u>country</u> | <u>language</u> | <u>addedBy</u> * | addedOn*            |
|------------------|-------------------------|-------------|----------------|-----------------|------------------|---------------------|
| 1                | 1.0.0                   | artist      | DE             | de              | 1                | 2020-10-26 15:30:36 |
| 1                | 1.0.0                   | artist      | US             | en              | 1                | 2020-10-26 15:30:36 |
| 1                | 1.0.0                   | artist      | ES             | es              | 1                | 2020-10-26 15:30:36 |
| 1                | 1.0.0                   | duration    | DE             | de              | 1                | 2020-10-26 15:30:36 |

Localization

| <u>app</u> | <u>appVersion</u> | <u>country</u> | <u>addedBy</u> * | addedOn*            |
|------------|-------------------|----------------|------------------|---------------------|
| 1          | 1.0.0             | DE             | 1                | 2020-10-26 15:30:36 |
| 1          | 1.0.0             | US             | 1                | 2020-10-26 15:30:36 |
| 1          | 1.0.0             | ES             | 1                | 2020-10-26 15:30:36 |
| 1          | 1.1.0             | US             | 1                | 2020-10-26 15:30:36 |





# LogRecord

| logID | eventName*     | <u>level</u> * | levelText*      | <u>app</u> * | appVersion* | <u>system</u> | <u>systemVersion</u> | addedOn*            | traceID |
|-------|----------------|----------------|-----------------|--------------|-------------|---------------|----------------------|---------------------|---------|
| 1     | FindByID       | 9              | Info (Level 1)  | 1            | 1.0.0       | 1             | 1.0.0                | 2020-10-26 15:30:36 | 1       |
| 2     | ProcessStarted | 9              | Info (Level 1)  | 1            | 1.0.0       | null          | null                 | 2020-10-26 15:30:36 | 2       |
| 3     | RequestFailed  | 17             | Error (Level 1) | 1            | 1.0.0       | 3             | 1.0.0                | 2020-10-26 15:30:36 | 3       |
| 4     | ProcessEnded   | 9              | Info (Level 1)  | 1            | 1.0.0       | null          | null                 | 2020-10-26 15:30:36 | 2       |

#### LogLevel

| <u>levelID</u> | <u>type</u> * | name*           |
|----------------|---------------|-----------------|
| 1              | 1             | Trace (Level 1) |
| 2              | 1             | Trace (Level 2) |
| 3              | 2             | Debug (Level 1) |
| 4              | 2             | Debug (Level 2) |

## LogType

| <u>typeID</u> | name* |  |
|---------------|-------|--|
| 1             | Trace |  |
| 2             | Debug |  |
| 3             | Info  |  |
| 4             | Warn  |  |

## LogBody

| <u>bodyID</u> | <u>log</u> * | key     | value  | <u>parent</u> |
|---------------|--------------|---------|--|---------------|
| 1             | 1            | message | The entity with the ID 1 could not be found      | 3             |
| 2             | 1            | code    | 404  | 3             |
| 3             | 1            | error   | null   | null          |
| 4             | 3            | null    | Request to https://api.yummy-yogurt.com was sent | null          |

## LogAttribute

| <u>log</u> | <u>key</u> | value*                            |  |  |
|------------|------------|-----------------------------------|--|--|
| 1          | url        | jdbc:mysql://localhost:3306/vinyl |  |  |
| 1          | port       | 3306                              |  |  |
| 3          | url        | https://api.yummy-yogurt.com      |  |  |
| 3          | port       | 8080                              |  |  |

- The system and systemVersion column in the log record table must be maintained together:
  - system column is null ↔ systemVersion column is null
  - system column is not null  $\leftrightarrow$  systemVersion column is not null

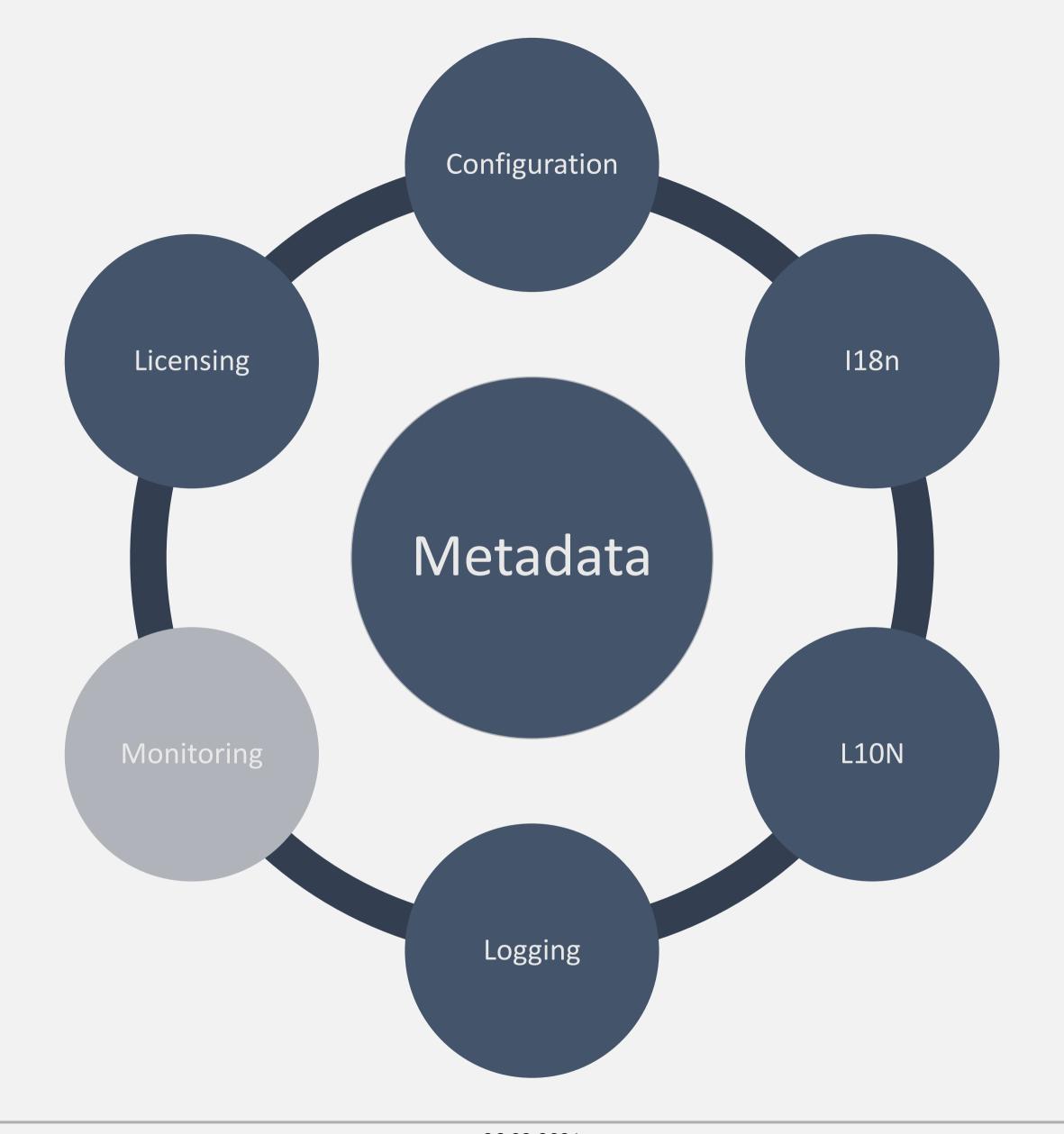
# Logging

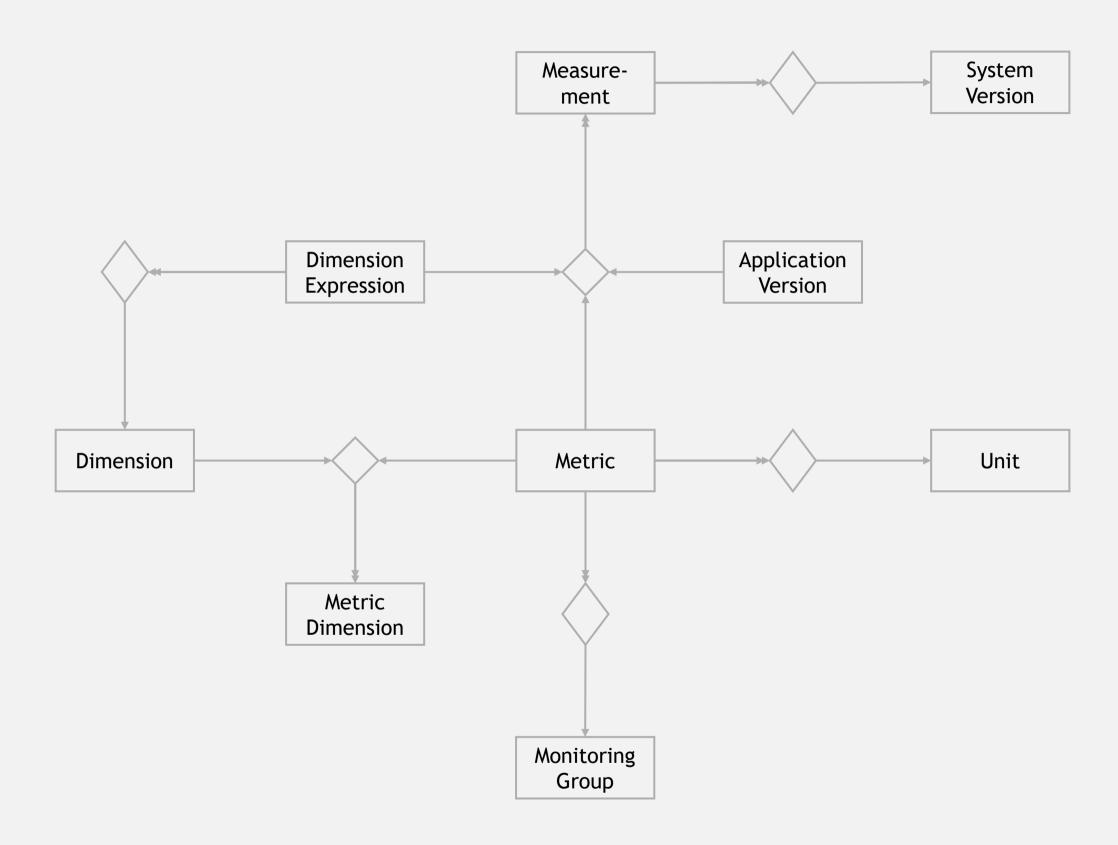
#### Understanding the Log Body

- The log body can contain a json tree structure or just plain text. There are certain combinations for the columns key, value and parent that are not allowed in the log body.
- The following red combinations are not allowed:
  - If the key and value column are null, there is no reason to insert the row, as it doesn't provide any information about the log.
  - If the key column is null and the others are not null, you try to add a value to a nested object. But only key/value pairs can be added to a nested object.
  - If the value column is null and the others are not null, you try to add a key/value pair to a
    nested object that doesn't provide any information about the log.
- The green combinations are allowed and have the following meaning:
  - If all columns are not null, you add a key/value pair to a nested object.
  - If the parent column is null, but the others are not null, you add a key/value pair to the root of the object.
  - If the key column is not null and the others are null, you define the key for a nested object.
  - If the value column is not null and the others are null, the body is just plain text and not a json object.

| value | parent                    |
|-------|---------------------------|
| null  | null                      |
| null  | X                         |
| X     | X                         |
| null  | X                         |
| X     | X                         |
| X     | null                      |
| null  | null                      |
| X     | null                      |
|       | null x null X null X null |

Figure 1 – Possible combinations for the log body





# Monitoring

#### Metric

| metricID | name*          | description*                | monitoringGroup* | <u>unit</u> | modifiedBy* | modifiedOn*         |
|----------|----------------|-----------------------------|------------------|-------------|-------------|---------------------|
| 1        | CPU Time       | Measures the time the CPU   | 3                | 137         | 1           | 2020-10-26 15:30:36 |
| 2        | Memory Usage   | Measures the usage of the   | 3                | 33          | 1           | 2020-10-26 15:30:36 |
| 3        | Response Count | Counts the amount of Resp   | 4                | null        | 1           | 2020-10-26 15:30:36 |
| 4        | Process Count  | Counts the processes of the | 3                | null        | 1           | 2020-10-26 15:30:36 |

#### MonitoringGroup

| groupID | name*            | <u>modifiedBy</u> * | modifiedOn*         |
|---------|------------------|---------------------|---------------------|
| 1       | Database         | 1                   | 2020-10-26 15:30:36 |
| 2       | File System      | 1                   | 2020-10-26 15:30:36 |
| 3       | Operating System | 1                   | 2020-10-26 15:30:36 |
| 4       | Http Response    | 1                   | 2020-10-26 15:30:36 |

#### **Dimension**

| dimensionID | name*        | description*                                   | modifiedBy* | modifiedOn*         |
|-------------|--------------|--|-------------|---------------------|
| 1           | Status Code  | The status code of http response               | 1           | 2020-10-26 15:30:36 |
| 2           | Memory State | The state of the memory                        | 1           | 2020-10-26 15:30:36 |
| 3           | Http Method  | The http method of the request                 | 1           | 2020-10-26 15:30:36 |
| 4           | Operation    | The operation that is performed by the request | 1           | 2020-10-26 15:30:36 |

#### DimensionExpression

| <u>dimension</u> | <u>expression</u> | <u>addedBy</u> * | addedOn*            |
|------------------|-------------------|------------------|---------------------|
| 1                | 404               | 1                | 2020-10-26 15:30:36 |
| 1                | 500               | 1                | 2020-10-26 15:30:36 |
| 2                | used              | 1                | 2020-10-26 15:30:36 |
| 2                | free              | 1                | 2020-10-26 15:30:36 |

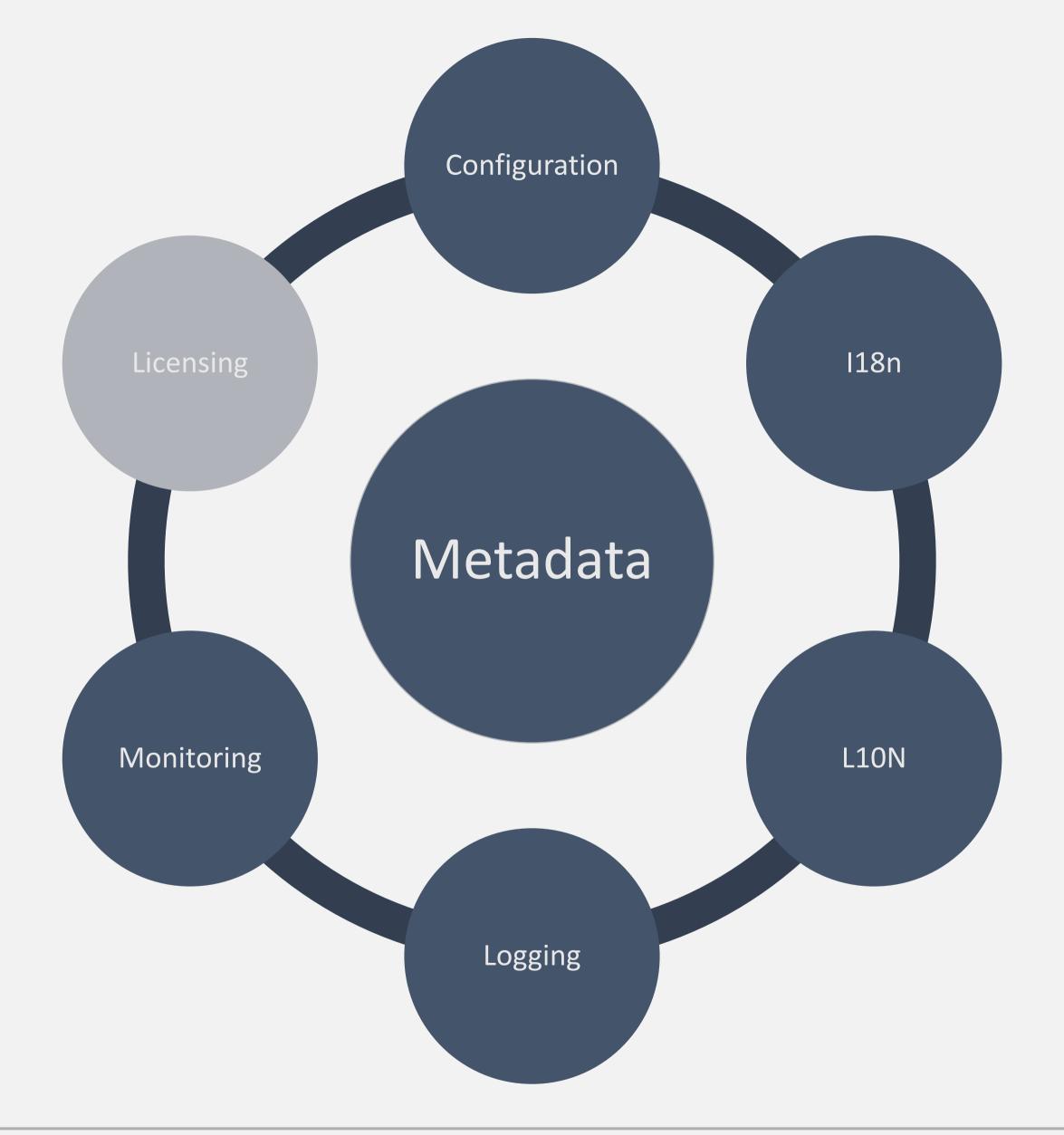
#### MetricDimension

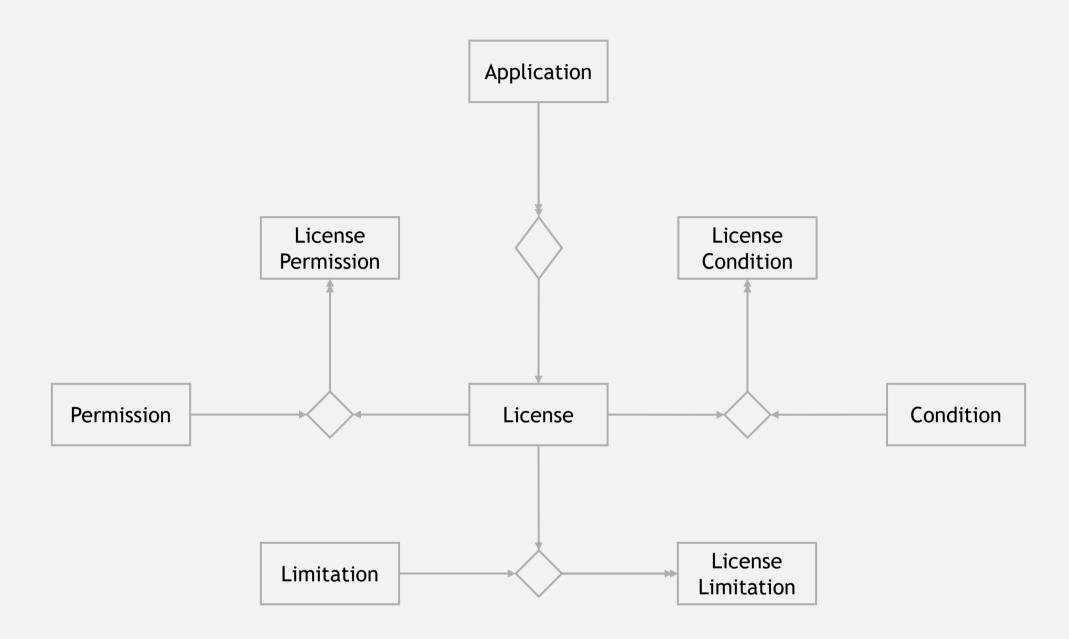
| <u>metric</u> | <u>dimension</u> | <u>addedBy</u> * | addedOn*            |
|---------------|------------------|------------------|---------------------|
| 2             | 1                | 1                | 2020-10-26 15:30:36 |
| 3             | 2                | 1                | 2020-10-26 15:30:36 |
| 5             | 3                | 1                | 2020-10-26 15:30:36 |
| 5             | 4                | 1                | 2020-10-26 15:30:36 |

#### Measurement

| <u>app</u> | <u>appVersion</u> | <u>metric</u> | <u>dimension</u> | <u>expression</u> | <u>addedOn</u>      | <u>system</u> | <u>systemVersion</u> | value* |
|------------|-------------------|---------------|------------------|-------------------|---------------------|---------------|----------------------|--------|
| 1          | 1.0.0             | 3             | 1                | 404               | 2020-10-26 15:30:36 | null          | null                 | 1      |
| 1          | 1.0.0             | 3             | 1                | 404               | 2020-10-26 15:30:36 | null          | null                 | 2      |
| 1          | 1.0.0             | 2             | 2                | used              | 2020-10-26 15:30:36 | null          | null                 | 10     |
| 1          | 1.0.0             | 2             | 2                | used              | 2020-10-26 15:30:36 | null          | null                 | 8      |

- The system and systemVersion column in the measurement table must be maintained together:
  - system column is null  $\leftrightarrow$  systemVersion column is null
  - system column is not null ↔ systemVersion column is not null





# Licensing

#### License

| licenseID  | spdxID*    | name*                                  | description*                                   | url*                       | content*                                       |
|------------|------------|--|--|----------------------------|--|
| mit        | MIT        | MIT License                            | A short and simple permissive license with con | http://choosealicense.com/ | MIT License\n\nCopyright (c) [year] [fullname] |
| apache-2.0 | Apache-2.0 | Apache License 2.0                     | A permissive license whose main conditions req | http://choosealicense.com/ | Apache Licens                                  |
| agpl-3.0   | AGPL-3.0   | GNU Affero General Public License v3.0 | Permissions of this strongest copyleft license | http://choosealicense.com/ | GNU AFFERO GENERAL PUBLIC                      |
| unlicense  | Unlicense  | The Unlicense                          | A license with no conditions whatsoever which  | http://choosealicense.com/ | This is free and unencumbered software release |

#### **Permission**

| <u>permissionID</u> | name*          | description*   |
|---------------------|----------------|--|
| commercial-use      | Commercial Use | The licensed material and derivatives may be used for commercial purposes. |
| distribution        | Distribution   | The licensed material may be distributed.                                  |
| modifications       | Modification   | The licensed material may be modified.                                     |
| private-use         | Private Use    | The licensed material may be used and modified in private.                 |

#### LicensePermission

| <u>license</u> | <u>permission</u> |
|----------------|-------------------|
| agpl-3.0       | commercial-use    |
| agpl-3.0       | distribution      |
| agpl-3.0       | modifications     |
| agpl-3.0       | patent-use        |

#### **Condition**

| <u>conditionID</u> | name*                        | description*  |
|--------------------|------------------------------|---|
| disclose-source    | Disclose Source              | Source code must be made available when the licensed material is distributed.                 |
| include-copyright  | License and Copyright Notice | A copy of the license and copyright notice must be included with the licensed material.       |
| same-license       | Same License                 | Modifications must be released under the same license when distributing the licensed material |
| document-changes   | State Changes                | Changes made to the licensed material must be documented.                                     |

#### LicenseCondition

| <u>license</u> | <u>condition</u>  |
|----------------|-------------------|
| agpl-3.0       | disclose-source   |
| agpl-3.0       | include-copyright |
| agpl-3.0       | same-license      |
| agpl-3.0       | document-changes  |

#### Limitation

| <u>limitationID</u> | name*         | description*  |
|---------------------|---------------|---|
| liability           | Liability     | This license includes a limitation of liability.  |
| warranty            | Warranty      | This license explicitly states that it does NOT provide any warranty.                                       |
| trademark-use       | Trademark Use | This license explicitly states that it does NOT grant trademark rights, even though licenses without such a |
| patent-use          | Patent Use    | This license explicitly states that it does NOT grant any rights in the patents of contributors.            |

#### LicenseLimitation

| <u>license</u> | <u>limitation</u> |
|----------------|-------------------|
| agpl-3.0       | liability         |
| agpl-3.0       | warranty          |
| apache-2.0     | trademark-use     |
| apache-2.0     | liability         |