Nirva Datetime Service

Document Version: 1.04

Table of Contents

Overview

The Nirva Datetime service provides functions for date management : date operations and date format.

Performance

The service is based upon a JAVA library.

Installation

The DATETIME service is delivered as a NIRVA package and can be installed like any NIRVA service directly from the NIRVA configuration web site. Please see the NIRVA configuration chapter in the NIRVA user's guide for further information.

Configuration

There is no specific configuration.

Reference

This chapter gives the complete reference of all the DATETIME service commands.

Classes

Here are the available DATETIME service classes:

Class	Description
SETUP	Configuration class
TIME	Time based commands class
DATE	Date based commands class

Error codes

The same error codes are shared with the four classes.

PARAMETER Class

Value	Description
100	Invalid command
101	Invalid command parameter

DATETIME Class

Value	Description
101	Parse date exception
102	Error in pattern

Parameter Reference

These parameters are common parameters used by each command. They have the same meaning for all commands (where they can be used), except if they are redefined in the command description.

INTIMEZONE

This parameter is the timezone for the input date. It is only used when localization is required (LOCAL-IZE=YES). Default is GMT.

TIMEZONE

This parameter is the required timezone for output when localization is required. Default is configured by the command SETUP:SET_TIMEZONE, or GMT if not provided.

LOCALIZE

This parameter, when set to YES, tells the service to localize the output date, if the command returns a date. Default value is "NO".

PATTERN

This parameter is the pattern used for input and output dates. Input dates must match this pattern. Output dates will match the pattern.
Default pattern is "yyyy-MM-dd HH:mm:ss".

INPATTERN

This parameter is the pattern used for input dates. Input dates should match this pattern.
This parameter has priority over the parameter PATTERN.

OUTPATTERN

This parameter is the pattern used to format output dates.
This parameter has priority over the parameter PATTERN.

INLOCALE

This parameter is the locale to parse input dates.

Locales are made with up to 3 components:

- The language (2 characters lowercase)

- The country, two-letter uppercase codes as defined by ISO-3166

- The variant, which is specific to vendors

This 3 components must be joined with '-' character to parameter INLOCALE.

See http://download.oracle.com/javase/1.4.2/docs/api/java/util/Locale.html for more information

Example of valid locales for DATETIME service:

- en

- en-GB

- fr

- fr-BE

OUTLOCALE

This parameter is the locale to format output dates.

It has the same specifications as INLOCALE parameter.

Constant Reference

Units

Here is the list of all units available in commands that need units (like DATE:ADD).
Units are case insensitive.

Value	Description
YEAR	Command acts on the YEAR field of the date
MONTH	Command acts on the MONTH field of the date
DAY	Command acts on the DATE field of the date (deprecated unit)
DATE	Command acts on the DATE field of the date
HOUR	Command acts on the HOUR field of the date
MINUTE	Command acts on the MINUTE field of the date
SECOND	Command acts on the SECOND field of the date
MILLISECOND	Command acts on the MILLISECOND field of the date
YEAR	Command acts on the YEAR field of the date

Days of week

Here is the list of all the week days, as the DATETIME service knows them.
The TIME:DAYOFWEEK command returns the day of week corresponding to the input date.

Values go from 'MONDAY' to 'SUNDAY'.

Commands

For each command, the reference gives the command name, the sources for which the command may be used, the command description, the eventual command permissions, the parameter list and the eventual list of objects created by the command.

> The parameters described in this chapter are command specific parameters. For general parameters, please refer to the Nirva command syntax chapter.

The available sources are:

- Client for all Nirva client interfaces including Nirva client library (nvc).

- Web for commands from a web browser.

- Procedure for commands from a Nirva procedure.

- Service for commands from service to service

All commands use the PATTERN parameters (PATTERN, INPATTERN, OUTPATTERN) to format output dates and to parse input dates.

All commands use LOCALIZE=YES to localize the output date, with TIMEZONE parameters to set the time-zone for localization. TIMEZONE is often ommitted since it is configured once forever for each session with the DATETIME:SETUP:SET_TIMEZONE command.

All commands read input dates from the input container, and write result in the output container, unless specified in the command documentation.

SETUP class

This class is used to retrieve some information about the image file.

SET_TIMEZONE

DATETIME:SETUP:SET_TIMEZONE

Source	Use Input Container	Use Output Container
Client Web Procedure Service	NO	NO

Description

This command sets the default output timezone for this session. It allows to not bother about the timezone parameter for further commands, if the timezone is constant accross the session.

Parameters

TIMEZONE   Default timezone to set for the session

Permissions

None

TIME class

NOW

DATETIME:TIME:NOW

Source	Use Input Container	Use Output Container
Client Web Procedure Service	NO	YES

Description

This command fetches the current time.
It creates a string object in the output container, which name is specified using the OUTPUT parameter.
On Nirva server > 3.0.007, it also copies the result in output buffer.

Permissions

None

Parameters

OUTPUT   Name of the output object in which the date is stored. NOW is the default.

Objects created

NOW   STRING object containing the current date, formatted with the OUTPATTERN pattern.

FIRSTDAYOFMONTH

DATETIME:TIME:FIRSTDAYOFMONTH

Source	Use Input Container	Use Output Container
Client Web Procedure Service	YES	Yes

Description

This command returns the first day of the month of the given date.
For example, this commands returns 01/01/2000 for any input date between 01/01/2000 and 31/01/2000.
The result is stored in a STRING object, which name is specified using the OUTPUT parameter.

Permissions

None

Parameters

NAME   Name of the in object containing the input date. This parameter is mandatory

OUTPUT   Name of the output object in which the date is stored. Default is FIRSTDAYOFMONTH.

Objects created

FIRSTDAYOFMONTH   STRING object containing the first day of the month of the input date, formatted with OUTPATTERN pattern.

LASTDAYOFMONTH

DATETIME:TIME:LASTDAYOFMONTH

Source	Use Input Container	Use Output Container
Client Web Procedure Service	YES	Yes

Description

This command returns the last day of the month of the given date.
For example, this commands returns 31/01/2000 for any input date between 01/01/2000 and 31/01/2000.
Another example, this commands returns 29/02/2000 for any input date between 01/02/2000 and 29/02/2000.
The result is stored in a STRING object, which name is specified using the OUTPUT parameter.

Permissions

None

Parameters

NAME	Name of the in object containing the input date. This parameter is mandatory
OUTPUT	Name of the output object in which the date is stored. Default is LASTDAYOFMONTH.

Objects created

LASTDAYOFMONTH	STRING object containing the last day of the month of the input date, formatted with OUTPATTERN pattern.

DAYOFWEEK

DATETIME:TIME:DAYOFWEEK

Source	Use Input Container	Use Output Container
Client Web Procedure Service	YES	Yes

Description

This command returns the name of the day of the week for the input date. The returned names and their values are defined in the Constant Reference section, paragraphe Days of week.
Example :
NV_CMD=|OBJECT:CREATE| NAME=|today| TYPE=|STRING| VALUE=|07/02/2008|
NV_CMD=|DATETIME:TIME:DAYOFWEEK| NAME=|today| INPATTERN=|dd/MM/yyyy | OUTPUT=|day|
'day' now contains 'THURSDAY'.

The result is stored in a STRING object, which name is specified using the OUTPUT parameter.

Permissions

None

Parameters

NAME	Name of the in object containing the input date. This parameter is mandatory
OUTPUT	Name of the output object in which the date is stored. Default is DAYOFWEEK.

Objects created

DAYOFWEEK	STRING object containing the name of the week for the input date. See Constant Reference section.

IS_VALID

DATETIME:TIME:IS_VALID

Source	Use Input Container	Use Output Container
Client Web Procedure Service	YES	Yes

Description

This command checks that the input date is valid.
For example, if the input date is 31/02/2008, java considers that it is a valid date for 02/03/2008. So we parse the date, then format it again to string using the same formatter. We then compare the 2 resulting strings to determine if the date is indeed valid.
The result is stored in a STRING object, which name is specified using the OUTPUT parameter. The result can be either YES, if the date is valid, or NO otherwise.

Permissions

None

Parameters

NAME	Name of the in object containing the input date. This parameter is mandatory
OUTPUT	Name of the output object in which the date is stored. Default is VALID.

Objects created

VALID   STRING object containing the result. YES if the input date is valid, NO otherwise.

DATE class

TABLE_FORMAT

DATETIME:DATE:TABLE_FORMAT

Source	Use Input Container	Use Output Container
Client Web Procedure Service	YES	NO

Description

This command formats the column of a Nirva TABLE, parsing the cells of the column with the INPATTERN and formatting them with the OUTPATTERN.

Permissions

None

Parameters

NAME   Name of the the NIRVA table. This parameter is mandatory.

COLNAME   Column name to format. This parameter is mandatory.

INDSTRINGLIST_FORMAT

DATETIME:DATE:INDSTRINGLIST_FORMAT

Source	Use Input Container	Use Output Container
Client Web Procedure Service	YES	NO

Description

This command formats the value of a key in an indexed string list, parsing it with the INPATTERN and formatting it with the OUTPATTERN.

Permissions

None

Parameters

NAME	Name of the the NIRVA indexed string list. This parameter is mandatory.
KEY	KEY associated with the value to format. This parameter is mandatory.

FORMAT

DATETIME:DATE:FORMAT

Source	Use Input Container	Use Output Container
Client Web Procedure Service	YES	YES

Description

This command formats a date from an object in the input container, to store it in the output container.

Permissions

None

Parameters

NAME   Name of the in object containing the input date. This parameter is mandatory

OUTPUT   Name of the output object in which the formatted date is stored. Default is
                        OUTPUT.

Objects created

VALID   STRING object containing the formatted date

TABLE_ADD

DATETIME:DATE:TABLE_ADD

Source	Use Input Container	Use Output Container
Client Web Procedure Service	YES	YES

Description

This command adds a value for a unit, in all cells of a column in the specified NIRVA Table object.
The unit parameter must refer to one of those defined in the Constant Reference section, in the paragraph
"Units".

Permissions

None

Parameters

NAME   Name of the NIRVA table. This parameter is mandatory

COLNAME   Column name to apply the operation on. This parameter is mandatory

UNIT   Unit of the value to add to the dates. Unit must match one of those defined in
                        the Constant Reference section. This parameter is mandatory

VALUE   Value to add to the field UNIT. This parameter is mandatory

ADD

DATETIME:DATE:ADD

Source	Use Input Container	Use Output Container
Client Web Procedure Service	YES	YES

Description

This command adds a value, for a unit, to a date in a NIRVA String object.
The unit parameter must refer to one of those defined in the Constant Reference section, in the paragraph "Units".

Permissions

None

Parameters

NAME   Name of the object containing the input date. This parameter is mandatory

UNIT   Unit of the value to add to the dates. Unit must match one of those defined in the Constant Reference section. This parameter is mandatory

VALUE   Value to add to the field UNIT. This parameter is mandatory

OUTPUT   Name of the output object in which the resulting date is stored. Default is OUTPUT.

Objects created

OUTPUT   STRING object containing the resulting date

GET

DATETIME:DATE:GET

Source	Use Input Container	Use Output Container
Client Web Procedure Service	YES	YES

Description

This command allows to get a specific field of a date, specified by the UNIT parameter.
For MONTH, returned value goes from 1 to 12, for January to December.

Permissions

None

Parameters

NAME	Name of the object containing the input date. This parameter is mandatory
UNIT	Unit of the value to add to the dates. Unit must match one of those defined in the Constant Reference section. This parameter is mandatory
OUTPUT	Name of the output object in which the resulting date is stored. Default is UNIT.

Objects created

OUTPUT	STRING object containing the resulting value of the field

COMPARE

DATETIME:DATE:COMPARE

Source	Use Input Container	Use Output Container
Client Web Procedure Service	YES	YES

Description

This command compares a given input date in a NIRVA object with a given reference date in a NIRVA object.
The result can be :

- "before" if the input date is before the reference date

- "after" if the input date is after the reference date

- "equal" if the input date is equal to the reference date

Permissions

None

Parameters

NAME	Name of the object containing the input date. This parameter is mandatory
NAMEREF	Name of the object containing the input reference date. This parameter is mandatory
OUTPUT	Name of the output object in which the result is stored. Default is COMPARE.

Objects created

OUTPUT	STRING object containing the result

TABLE_COMPARE

DATETIME:DATE:TABLE_COMPARE

Source	Use Input Container	Use Output Container
Client Web Procedure Service	YES	NO

Description

This command compares the cells of the given column in the NIRVA Table object with a given reference date in a NIRVA object.

nirva

The result is stored in the specified COLOUTPUT column. If this column does not exist, the command creates it.

The result in the output column can be :

- "before" if the input date in the cell of the row is before the reference date

- "after" if the input date in the cell of the row is after the reference date

- "equal" if the input date in the cell of the row is equal to the reference date

Permissions

None

Parameters

NAME	Name of the NIRVA table. This parameter is mandatory
NAMEREF	Name of the string containing the input reference date. This parameter is mandatory
COLNAME	Column name to apply the operation on. This parameter is mandatory
COLOUTPUT	Name of the output column (of NAME object) in which the result is stored. Default is DATE_COMPARE.