KIX Professional InventorySync

Backend "Baramundi"

Installation and configuration

c.a.p.e. IT® GmbH

Version: 17.0.0

Imprint

Title:	KIX Professional InventorySync Backend "Baramundi"
Topic:	Installation and configuration
Author:	c.a.p.e. IT® GmbH
Keywords:	KIX, Inventory, baramundi, KIX Professional
Comments:	
Filename:	InventorySyncBaramundiBackend_installation_and_configuration_en.odt
Version:	17.0.0
Set and Layout:	LibreOffice.org Version 5.2.x

Table of contents

1 General advices

1.1 Document information

1.1.1   Objectives

This document contains all the information to install and configure the KIX Professional InventorySync backend "Baramundi".

1.2 Changes

1.2.1   Change history

Version	Date	Changed chapters	Short description	Changed by
0.1.0	18.12.13	all	document creation	Rene Boehm
0.1.1	06.02.14	3.1.3, Appendix	- Fixed error in ODBC connection string - updated CI class expample	Rene Boehm
0.1.2	07.02.14	Appendix	Updated CI class example	Rene Boehm
0.1.3	29.10.14	2.1	added some more requirements	Rene Boehm
1.0.0	21.05.15	2.1	Upgrade for OTRS 4.0	Ricky Kaiser
1.1.0	24.02.16	All	Upgrade for OTRS 5.0	Rene Boehm
1.1.0	11.03.16	3.2	Added WMI scans	Rene Boehm
17.0.0	05.02.17	All	Updated for KIX Professional 17.0.0	Rene Boehm

1.2.2   Authors

Surname, first name	Organisation	Function
Boehm, Rene	c.a.p.e. IT® GmbH	Head of Development

1.2.3   Document owner

Organisation	Surname, first name	Address	Contacts
c.a.p.e. IT® GmbH		Schoenherrstr. 8 09113 Chemnitz	info@cape-it.de +49 371 27095 - 620

1.2.4   Authorized staff

Surname, first name	Organisation	Function	Auth.
Boehm, Rene	c.a.p.e. IT® GmbH	Head of Development	rw
Boehm, Ralf	c.a.p.e. IT® GmbH	Developer	rw
Kaiser, Ricky	c.a.p.e. IT® GmbH	Developer	rw

1.3 List of abbreviations

CI   Config Item

CLI   Command Line Interface

DB   Database

GUI   Graphical User Interface

2 Installation

2.1 Requirements

To install and use this data backend for the KIX Professional function "InventorySync" the following is required:

- a KIX Professional 17.0.x installation
- a Baramundi 8.9 or higher installation
- some hardware inventory data based on the Standard Template or WMI

2.2 Package Installation

Just install the „Baramundi" backend module via your operating systems package management. The package name is „kixpro-inventorysync-baramundi". Please make sure you have fulfilled the necessary requirements (see 2.1).

3 Configuration

3.1 SysConfig Options

After you have installed all the needed packages, you have to configure all the parameters necessary for this backend to communicate with the Baramundi DBMS.

To configure the extension just open the SysConfig in the admin area. Select the SysConfig group "KIX Professional". After the page reload select the subgroup "ITSMConfigItem::InventorySync".

An example configuration is already included in the package. You should change it to your needs.

The following section lists all the important options needed to get the InventorySync function working.

3.1.1 Sources

SysConfig Option: ITSMConfigItem::InventorySync###Sources

A source represents a named communication point. A SysConfig hash option is used for its configuration. The hash-key is the internal name of the source, i.e. "inventory1". The hash-value is the display name of this source, i.e. "inventory server 1".

You can add more sources for each external inventory server.

3.1.2 Source-Backend-Mapping

SysConfig Option: ITSMConfigItem::InventorySync###Backend

The system needs to know which backend should be used for a source to communicate with the external inventory tool. The hash-key is the Source's identifier (i.e. "inventory1" in our example) and the hash-value has to be "Baramundi" to tell InventorySync to use the Baramundi backend for this data source.

3.1.3 Source Parameters

SysConfig Option: ITSMConfigItem::InventorySync###Parameters

Here you have to configure the database connection string (DSN) in the following form:

```
DatabaseDSN=DBI:ODBC:<DataSource>;DatabaseUser=<uid>;DatabasePw=<pwd>;<additional
parameters>[;UseInventoryType=<InventoryType>]
```

Parameter	Required	Description
DataSource	X	the name of the Baramundi ODBC data source
DatabaseUser	X	username of the database user
DatabasePw	X	password of the database user
Additional parameters		This depends on the data source you've configured, but if your data source is a MSSQL, you have to add „Type=mssql" as additional parameter
UseInventoryType		Optional parameter to specify which type of inventory data should be used. If not given, the "Standard Template" data will be used. If you want to use WMI data, just set it to "WMI".

<u>PLEASE NOTE:</u>
You have to use a DSN based ODBC connection string, DSN-less configurations will not work.

3.2 InventoryContentXPath for backend „Baramundi"

The basic extension of CI classes and the usage of the InventoryContentXPath parameter are described in the documentation of the KIX Professional function „InventorySync".

3.2.1 Standard Hardware Scans

The structure and contents of the hardware inventory data returned by the Baramundi backend is nearly identical to the contents of the treeview for each hardware inventory scan in Baramundi and basically has the following form:

- **Central Processor(s)**
  - ◦ <list of attributes of each CPU>
- **Motherboard**
  - ◦ <list of attributes of Motherboard node>
- **Memory**
  - ◦ <list of attributes for each RAM slot>
- **Video Adapter**
  - ◦ <list of attributes for each video adapter>
- **Monitor**
  - ◦ <list of attributes for each monitor>
- **Drives::FLOPPY**
  - ◦ <list of attributes for each floppy drive>
- **Drives::IDE Drives**
  - ◦ <list of attributes for each IDE drive>
- **Audio**
  - ◦ <list of attributes for each audio device>
- **Network**
  - ◦ <list of attributes for each network device>
- **Ports**
  - ◦ <list of attributes for each port>

3.2.2 WMI Hardware Scans

The structure of WMI scans in Baramundi differ from the standard scans. Therefore the data in InventorySync will be mapped to a structure similar to the structure of the standard scans. It basically has the following form, where the attributes of each point correspond to the columns shown in Baramundi:

- **Central Processor(s)**
  - ◦ refers to Baramundi node "Win32_Processor"
  - ◦ <list of attributes of each CPU>
- **BIOS**
  - ◦ refers to Baramundi node "Win32_BIOS"
  - ◦ <list of attributes of BIOS node>
- **Motherboard**
  - ◦ refers to Baramundi node "Win32_BaseBoard"
  - ◦ <list of attributes of Motherboard node>
- **Memory**
  - ◦ refers to Baramundi node "Win32_PhysicalMemory"

- ◦ <list of attributes for each RAM slot>
- • **Video Adapter**
  - ◦ refers to Baramundi node "Win32_VideoController"
  - ◦ <list of attributes for each video adapter>
- • **Monitor**
  - ◦ refers to Baramundi node "Win32_DesktopMonitor"
  - ◦ <list of attributes for each monitor>
- • **Drives::FLOPPY**
  - ◦ refers to Baramundi node "Win32_FloppyDrive"
  - ◦ <list of attributes for each floppy drive>
- • **Drives::CDROM**
  - ◦ refers to Baramundi node "Win32_CDROMDrive"
  - ◦ <list of attributes for each CDROM drive>
- • **Drives::PhysicalDisk**
  - ◦ refers to Baramundi node "Win32_DiskDrive"
  - ◦ <list of attributes for each disk drive>
- • **Drives::LogicalDisk**
  - ◦ refers to Baramundi node "Win32_LogicalDrive"
  - ◦ <list of attributes for each logical drive>
- • **Network**
  - ◦ refers to Baramundi node "Win32_NetworkAdapterConfiguration"
  - ◦ <list of attributes for each network device>
- • **Ports**
  - ◦ refers to Baramundi node "Win32_PortConnector"
  - ◦ <list of attributes for each port>

If Baramundi contains no detail attributes for a device, this device will be ignored.

3.2.3 Software Scans

Each software item structure is identified by the unique software GUID and contains the following attributes:

- • Name
- • Producer
- • Version

3.2.4 Xpath structure and examples

The Xpath for Baramundi has the following structure:

Hardware Xpath:

```
HW/<node>/<attribute>
```

Software Xpath:

```
SW/<guid>/<attribute>
```

Typical Xpaths for Baramundi may be:

```
HW/Central Processor\(s\)/CPU Brand Name
```
to get the name attribute of each processor

```
HW/Drives::IDE Drives/Drive Model
```
to get the model attribute of each harddisk drive

```
SW/.*?/Name
```
to get the name of the software, regardless of its GUID

4 Appendix

4.1 Example CI class "Computer" for backend "Baramundi"

The following example shows a CI class definition for class "Computer" with a couple of changes for the Baramundi backend based on standard hardware scans. Please note that these are no mandatory changes! You are absolutely free to make you own changes. You have just to make sure that mandatory CI attributes will get some value during the sync process. Otherwise KIX Professional will show an error message.

```
[
    {
        Key => 'Vendor',
        Name => 'Vendor',
        Searchable => 1,
        Input => {
            Type => 'Text',
            Size => 50,
            MaxLength => 50,
        },
    },
    {
        Key => 'Model',
        Name => 'Model',
        InventoryContentXPath => 'HW/Motherboard/Computer Brand Name',
        Searchable => 1,
        Input => {
            Type => 'Text',
            Size => 50,
            MaxLength => 50,
        },
    },
    {
        Key => 'Description',
        Name => 'Description',
        Searchable => 1,
        Input => {
            Type => 'TextArea',
        },
    },
    {
        Key => 'Type',
        Name => 'Type',
        Searchable => 1,
        Input => {
            Type => 'GeneralCatalog',
            Class => 'ITSM::ConfigItem::Computer::Type',
            Translation => 1,
        },
    },
    {
        Key => 'Owner',
        Name => 'Owner',
        Searchable => 1,
        Input => {
            Type => 'Customer',
        },
    },
    {
        Key => 'Motherboard',
        Name => 'Motherboard',
        InventoryContentXPath => 'HW/Motherboard/Motherboard Model',
```

```
                Searchable => 1,
                Input => {
                    Type => 'Text',
                    Size => 50,
                    MaxLength => 100,
                },
            Sub => [
                {
                    Key => 'BIOS Manufacturer',
                    Name => 'BIOS Manufacturer',
                    InventoryContentXPath => 'HW/Motherboard/BIOS Manufacturer',
                    Input => {
                        Type => 'Text',
                        Size => 50,
                        MaxLength => 50,
                    },
                },
            ],
        },
        {
            Key => 'CPU',
            Name => 'CPU',
            InventoryContentXPath => 'HW/Central Processor\(s\)/CPU Brand Name',
            Input => {
                Type => 'Text',
                Size => 50,
                MaxLength => 100,
            },
            CountMax => 16,
            Sub => [
                {
                    Key => 'Cores',
                    Name => 'Kerne',
                    InventoryContentXPath => 'HW/Central Processor\(s\)/Number of CPU Cores',
                    Input => {
                        Type => 'Text',
                        Size => 20,
                        MaxLength => 10,
                    },
                },
            ],
        },
        {
            Key => 'Ram',
            Name => 'Ram',
            Input => {
                Type => 'Dummy',
            },
            Sub => [
                {
                    Key => 'MemoryBank',
                    Name => 'Bank',
                    InventoryContentXPath => 'HW/Memory/Row Size',
                    Input => {
                        Type => 'Text',
                        Size => 50,
                        MaxLength => 100,
                    },
                    CountMax => 16,
                },
            ],
        },
        {
            Key => 'Drives',
            Name => 'Drives',
            InventoryContentXPath => 'HW/Drives::IDE Drives/Device Type',
            InventoryContentEvalString => '$Inventory{\'Device Type\'} eq \'Disk drive\'',
            Input => {
                Type => 'Text',
                Size => 50,
                MaxLength => 100,
            },
            CountMax => 10,
            Sub => [
                {
```

```
                            Key => 'Model',
                            Name => 'Model',
                            InventoryContentXPath => 'HW/Drives::IDE Drives/Drive Model',
                            Input => {
                                Type => 'Text',
                                Size => 50,
                                MaxLength => 50,
                            },
                        },
                    ],
                },
                {
                    Key => 'CD-Rom',
                    Name => 'CD-Rom',
                    Searchable => 1,
                    InventoryContentXPath => 'HW/Drives::IDE Drives/Drive Model',
                    InventoryContentEvalString => '$Inventory{\'Drive can read\'}',
                    Input => {
                        Type => 'Text',
                        Size => 50,
                        MaxLength => 100,
                    },
                },
                {
                    Key => 'FQDN',
                    Name => 'FQDN',
                    Searchable => 1,
                    Input => {
                        Type => 'Text',
                        Size => 50,
                        MaxLength => 100,
                    },
                },
                {
                    Key => 'NIC',
                    Name => 'Network Adapter',
                    InventoryContentXPath => 'HW/Network/Network Card',
                    Input => {
                        Type => 'Text',
                        Size => 50,
                        MaxLength => 100,
                    },
                    CountMin => 0,
                    CountMax => 10,
                    CountDefault => 1,
                    Sub => [
                        {
                            Key => 'IPoverDHCP',
                            Name => 'IP over DHCP',
                            Input => {
                                Type => 'GeneralCatalog',
                                Class => 'ITSM::ConfigItem::YesNo',
                                Translation => 1,
                            },
                        },
                        {
                            Key => 'IPAddress',
                            Name => 'IP Address',
                            Searchable => 1,
                            Input => {
                                Type => 'Text',
                                Size => 40,
                                MaxLength => 40,
                            },
                            CountMin => 0,
                            CountMax => 20,
                            CountDefault => 0,
                        },
                    ],
                },
                {
                    Key => 'GraphicAdapter',
                    Name => 'Graphic Adapter',
                    InventoryContentXPath => 'HW/Video Adapter/Video Chipset',
                    InventoryContentEvalString => '$Inventory{\'Video Chipset\'}',
```

```
            Input => {
                Type => 'Text',
                Size => 50,
                MaxLength => 100,
            },
        },
        {
            Key => 'Software',
            Name => 'Software',
            InventoryContentXPath => 'SW/.*?/Name',
            InventoryContentEvalString => '$Inventory{Name}',
            Input => {
                Type => 'Text',
                Size => 50,
                MaxLength => 100,
            },
            CountMax => 1000,
            Sub => [
                {
                    Key => 'Version',
                    Name => 'Version',
                    InventoryContentXPath => 'SW/.*?/Version',
                    Input => {
                        Type => 'Text',
                        Size => 20,
                        MaxLength => 20,
                    },
                },
                {
                    Key => 'SoftwareVendor',
                    Name => 'Vendor',
                    InventoryContentXPath => 'SW/.*?/Producer',
                    Input => {
                        Type => 'Text',
                        Size => 50,
                        MaxLength => 255,
                    },
                },
            ],
        },
        {
            Key => 'OtherEquipment',
            Name => 'Other Equipment',
            Input => {
                Type => 'TextArea',
            },
            CountMin => 0,
            CountDefault => 0,
        },
        {
            Key => 'WarrantyExpirationDate',
            Name => 'Warranty Expiration Date',
            Searchable => 1,
            Input => {
                Type => 'Date',
            },
        },
        {
            Key => 'InstallDate',
            Name => 'Install Date',
            Searchable => 1,
            Input => {
                Type => 'Date',
            },
            CountMin => 0,
            CountDefault => 0,
        },
        {
            Key => 'Note',
            Name => 'Note',
            Searchable => 1,
            Input => {
                Type => 'TextArea',
            },
            CountMin => 0,
```

```
        CountDefault => 0,
    },
];
```