



Defining Notifications

Send reminders by e-mail / perform maintenance tasks

TITLE	Defining Notifications
AUTHOR	Docusnap Consulting
DATE	12/12/2023
VERSION	4.0 valid as of November 13, 2023

The reproduction and distribution of this document as a whole or in part as well as the utilization and disclosure of its contents to third parties without the express authorization by itelio GmbH are prohibited. Offenders will be held liable for the payment of indemnification. All rights reserved.

TABLE OF CONTENTS

1.	Introduction	4
2.	Basics	5
3.	Notification definitions	6
3.1	Accessing the notification definition	6
3.2	Application samples	7
4.	Creating a notification	8
5.	Maintenance tasks	9

1. Introduction

Docusnap provides the ability to send notifications about events automatically via email. This document describes how to create a notification definition and subsequently a notification task in Docusnap.

The notification definition uses SQL statements to define the event for which a notification should be sent. The notification task executes the definition and sends an email when the event occurs.

To use email messaging, the Docusnap server must be configured, and an email server must be available. More information about this can be found in the Docusnap user manual or in the **HowTo Installation and Configuration**.

It also describes how you can use notification definitions for regular maintenance tasks. For example, you can use a maintenance task to periodically populate the virtualization host field of the inventoried systems.

2. Basics

The notification definitions are SQL queries. The notification definition defines the event for which you want to be notified by e-mail. E.g., that a license or maintenance contract has expired, that a certain software has been found during inventory, etc.

For a notification definition (the actual SQL statement) to be executed, a notification task is required. This notification task executes the SQL statement on the database and in case of a result, an email is sent with this result in an Excel list.

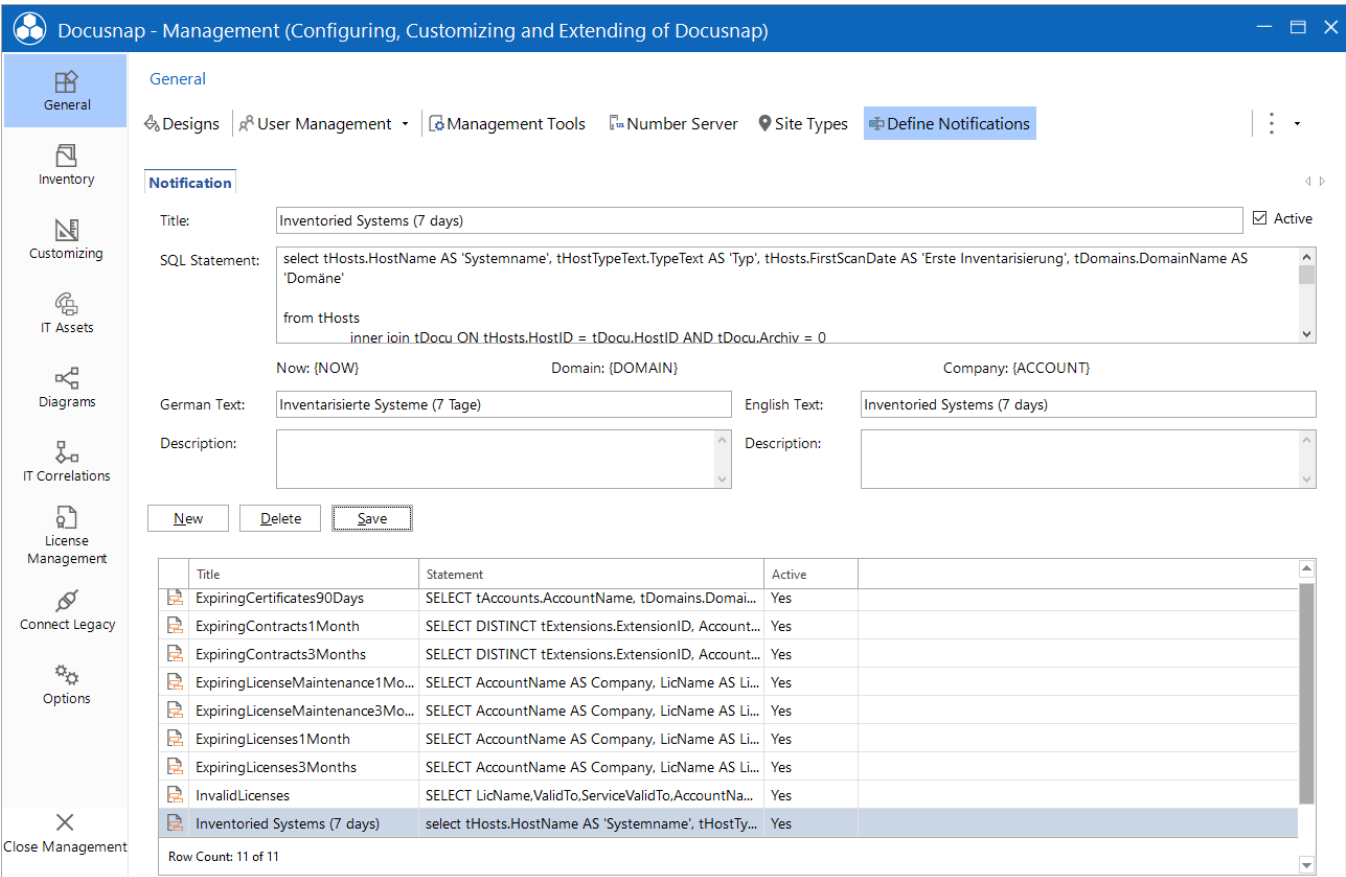
The important thing here is that Docusnap saves the last result. If a change is detected within the result during the next execution, a new email is sent. If there is no change, no new e-mail will be sent!

Furthermore, it should be noted that the Excel file receives the name of the scheduled notification task. Please use only characters that are allowed in a file name.

3. Notification definitions

3.1 Accessing the notification definition

The wizard for the notification definition can be opened from Navigation – Administration - General.



Docusnap - Management (Configuring, Customizing and Extending of Docusnap)

General | Designs | User Management | Management Tools | Number Server | Site Types | **Define Notifications**

Notification

Title: ☒ Active

SQL Statement:

Now: {NOW} Domain: {DOMAIN} Company: {ACCOUNT}

German Text: English Text:

Description:

Title	Statement	Active
ExpiringCertificates90Days	SELECT tAccounts.AccountName, tDomains.Domai...	Yes
ExpiringContracts1Month	SELECT DISTINCT tExtensions.ExtensionID, Account...	Yes
ExpiringContracts3Months	SELECT DISTINCT tExtensions.ExtensionID, Account...	Yes
ExpiringLicenseMaintenance1Mo...	SELECT AccountName AS Company, LicName AS Li...	Yes
ExpiringLicenseMaintenance3Mo...	SELECT AccountName AS Company, LicName AS Li...	Yes
ExpiringLicenses1Month	SELECT AccountName AS Company, LicName AS Li...	Yes
ExpiringLicenses3Months	SELECT AccountName AS Company, LicName AS Li...	Yes
InvalidLicenses	SELECT LicName, ValidTo, ServiceValidTo, AccountNa...	Yes
Inventoried Systems (7 days)	select tHosts.HostName AS 'Systemname', tHostTy...	Yes

Row Count: 11 of 11

Fig. 1 - Accessing the notification definition

For the creation is needed:

- Title
- SQL Statement
- German Text
- English Text

3.2 Application samples

The following SQL statement serves as an application example in this case:

```
SELECT
tHosts.HostName AS 'Systemname',
tHostTypeText.TypeText AS 'Type',
tHosts.FirstScanDate AS 'First Inventory',
tDomains.DomainName AS 'Domain'

FROM tHosts
INNER JOIN tDocu ON tHosts.HostID = tDocu.HostID AND tDocu.Archiv = 0
INNER JOIN tHostTypeText ON tHosts.HostTypeID = tHostTypeText.TypeID
INNER JOIN tDomains ON tHosts.DomainID = tDomains.DomainID

WHERE tHosts.FirstScanDate > CURRENT_TIMESTAMP - 7 /* 7 = days */
AND tHostTypeText.LanguageID = 1 /* 0 for german */
AND tDomains.AccountID = {ACCOUNT}

ORDER BY FirstScanDate DESC, HostName
```

The SQL statement lists all systems that were inventoried for the first time in the last 7 days.

The expression

```
and tDomains.AccountID = {ACCOUNT}
```

filters the systems to the company for which the notification will be set up later. If you remove this filtering, all systems, across all companies, that exist in the database would be listed.

In addition to the account variable, you can also use {NOW} and {DOMAIN} for filtering on today or a specific domain. You can choose the domain in the notification task.

Meaning	Placeholder in Docusnap	Replacement in SQL Server Mgmt Studio	Remark
Today	{NOW}	'04/20/15' CURRENT_TIMESTAMP	Make sure to indicate the date in the correct format as used in the database. Alternatively, you can use the SQL variable CURRENT_TIMESTAMP.
Domain	{DOMAIN}	DomainID	The Docusnap domain IDs can be displayed via the following SQL query: SELECT TOP 100 [DomainID],[DomainName] FROM [tDomains]
Company	{ACCOUNT}	AccountID	The Docusnap account IDs can be displayed via the following SQL query: SELECT TOP 100 [AccountID],[AccountName] FROM [tAccounts]

4. Creating a notification

You can find the wizard for creating notifications in

All jobs - All wizards - Notification

In the first step the company is selected.

In the second step, the previously defined notification is selected and at least one recipient and a subject for sending the email are specified. A list of the information returned by the SQL query is attached to the email as an Excel file.

If you want to store multiple recipients, you can separate them with a semicolon.

In the Scheduling step you define the execution of the notification task - e.g.

- Task type = Repeated
- Occurrence = Weekly
- Repeated every 1 week on Monday at 9:00 a.m.

Please note that the Excel file is given the name of the scheduled notification task. Please use only characters that are allowed in a file name here.

5. Maintenance tasks

As discussed previously, message definitions are SQL statements that are executed on the database via the notification task. Instead of SELECT queries, UPDATE statements can also be executed. The steps for creating the message definition, as well as the notification task, are the same as previously described.

Only for scheduling it makes sense to run the notification task more frequently - e.g., daily.

A regular use case for these maintenance tasks is, for example, the automatic filling of the virtualization host field of the inventoried virtual systems.

In addition to the actual systems, Docusnap also inventories the virtualization solutions HyperV, VMware and Citrix Hypervisor.

In this case, the systems are assigned via the Mac address. The Mac address of the VMs inventoried via the virtualization solution is compared with those of the inventoried systems (Windows, Mac, Linux).

VMWare

```

UPDATE tHosts SET VirtualServer = CONCAT(ServiceHostName, ' - ', DataCenterName, ' - ', ESXHostName)
FROM tESXVirtualMachine, tESXHost, tHosts, tESXComputeResource, tESXDataCenterHostFolder,
tESXDataCenter, tESXFolder, tESXServiceDocu, tESXDataCenterFolder, tDomains AS HostDomain, tESXService,
tDomains AS ESXDomain, tESXVmHwNic, tESXVmHardware,
(
    select tNetworkAdapter.*, tHosts.HostID, tDomains.AccountID from tNetworkAdapter, tDocu, tHosts,
tDomains
    where tNetworkAdapter.AdapterID in (
        select tNetworkAdapterConfiguration.AdapterID from tNetworkAdapterConfiguration)
    and tNetworkAdapter.DocuID = tDocu.DocuID
    and tDocu.Archiv = 0
    and tDocu.HostID = tHosts.HostID
    and tDomains.DomainID = tHosts.DomainID
) as vNetworkAdapter
WHERE tESXVmHwNic.MacAddress = vNetworkAdapter.MacAddress
and tHosts.HostID = vNetworkAdapter.HostID
AND tESXVirtualMachine.HostIdentifier = tESXHost.Identifier
AND tESXComputeResource.ComputeResourceID = tESXHost.ComputeResourceID
AND tESXDataCenterHostFolder.HostFolderID = tESXComputeResource.HostFolderID
AND tESXDataCenter.DataCenterID = tESXDataCenterHostFolder.DataCenterID
AND tESXFolder.ESXFolderID = tESXDataCenter.ESXFolderID
AND tESXServiceDocu.DocuID = tESXFolder.DocuID
AND tESXDataCenterFolder.DataCenterID = tESXDataCenter.DataCenterID
AND tESXDataCenterFolder.FolderID = tESXVirtualMachine.FolderID
AND tESXServiceDocu.Archiv = 0
AND tHosts.DomainID = HostDomain.DomainID
AND tESXServiceDocu.ServiceID = tESXService.ServiceID
AND tESXService.DomainID = ESXDomain.DomainID
AND tESXVmHardware.VirtualMachineID = tESXVirtualMachine.VirtualMachineID
AND tESXVmHwNic.VmHardwareID = tESXVmHardware.VmHardwareID
AND HostDomain.AccountID = ESXDomain.AccountID
AND vNetworkAdapter.AccountID = HostDomain.AccountID
AND ESXDomain.AccountID = {ACCOUNT} --Filtering on the selected company
AND HostDomain.AccountID = {ACCOUNT} --Filtering on the selected company

```

The statement adds the following information as a virtualization host:

- ESX Service Name (the inventoried vCenter).
- Data Center Name
- ESX Host

Furthermore, within the statement, the last two columns filter on the account/company for which the notification task is set up. If there are multiple companies in your Docusnap database and you do not want to set up a separate notification task for each, then simply remove the last two lines.

HyperV

```

update tHosts set VirtualServer = tHVNode.Name
from tHosts, tHVNode, tHVComputerSystem, tHVDocu, tDocu, tHVSystemService, tDomains AS HostDomain,
tDomains AS HyperVDomain, tHVVirtualSystemSettings, tHVEthernet,
(
    select tNetworkAdapter.*, tHosts.HostID, tDomains.AccountID from tNetworkAdapter, tDocu, tHosts,
tDomains
    where tNetworkAdapter.AdapterID in (
        select tNetworkAdapterConfiguration.AdapterID from tNetworkAdapterConfiguration)
    and tNetworkAdapter.DocuID = tDocu.DocuID
    and tDocu.Archiv = 0
    and tDocu.HostID = tHosts.HostID
    and tDomains.DomainID = tHosts.DomainID
) as vNetworkAdapter
where tHVNode.HVNodeID = tHVComputerSystem.HVNodeID
and tHosts.HostID = vNetworkAdapter.HostID
and tHVComputerSystem.HVComputerSystemID = tHVVirtualSystemSettings.HVComputerSystemID
and tHVEthernet.HVVirtualSystemSettingsID = tHVVirtualSystemSettings.HVVirtualSystemSettingsID
and vNetworkAdapter.MACAddress = tHVEthernet.Address
and tHosts.HostID = tDocu.HostID
and tHVNode.HVDocuID = tHVDocu.HVDocuID
and tHVSystemService.HVSystemServiceID = tHVDocu.HVSystemServiceID
and tDocu.Archiv = 0
and tHVDocu.Archiv = 0
and tHosts.DomainID = HostDomain.DomainID
and tHVSystemService.DomainID = HyperVDomain.DomainID
and HostDomain.AccountID = HyperVDomain.AccountID
and HostDomain.AccountID = vNetworkAdapter.AccountID
and HyperVDomain.AccountID = {ACCOUNT} -- Filtering on the selected company
and HostDomain.AccountID = {ACCOUNT} -- Filtering on the selected company

```

The statement adds the HyperV host.

Furthermore, the last two columns within the statement filter on the account/company for which the notification task is set up. If there are multiple companies in your Docusnap database and you do not want to set up a notification task for each of them, simply remove the last two lines.

Citrix Hypervisor

```

UPDATE tHosts SET VirtualServer = tXenHost.Name
FROM tXenHost, tXenHostVMs, tXenPoolDocu, tHosts, tXen, tDomains AS HostDomain, tDomains AS XenDomain,
tXenVMNICs,
(
    select tNetworkAdapter.*, tHosts.HostID, tDomains.AccountID from tNetworkAdapter, tDocu, tHosts,
tDomains
    where tNetworkAdapter.AdapterID in (
        select tNetworkAdapterConfiguration.AdapterID from tNetworkAdapterConfiguration)
    and tNetworkAdapter.DocuID = tDocu.DocuID
    and tDocu.Archiv = 0
    and tDocu.HostID = tHosts.HostID
    and tDomains.DomainID = tHosts.DomainID
) as vNetworkAdapter
WHERE tXenHost.HostID = tXenHostVMs.HostID
and tHosts.HostID = vNetworkAdapter.HostID
and tXenVMNICs.MAC = vNetworkAdapter.MACAddress
AND tXenVMNICs.VMID = tXenHostVMs.VMID
AND tXenPoolDocu.DocuID = tXenHost.DocuID
and tHosts.DomainID = HostDomain.DomainID
and tXenPoolDocu.XenID = tXen.XenID
and tXen.DomainID = XenDomain.DomainID
and HostDomain.AccountID = XenDomain.AccountID
and vNetworkAdapter.AccountID = HostDomain.AccountID
AND tXenPoolDocu.Archiv = 0
and XenDomain.AccountID = {ACCOUNT}           -- Filtering on the selected company
and HostDomain.AccountID = {ACCOUNT}           -- Filtering on the selected company

```

The statement adds the Xen host.

Furthermore, within the statement, the last two columns filter on the account/company for which the notification task is set up. If there are multiple companies in your Docusnap database and you do not want to set up a separate notification task for each, then simply remove the last two lines.

LIST OF FIGURES

FIG. 1 - ACCESSING THE NOTIFICATION DEFINITION 6

VERSION HISTORY

Date	Description
1/3/2016	Statement modified (2.4.6)
3/3/2017	List of figures modified
24/10/2018	Screenshots updated; Statement modified (2.4.5, 2.4.7 und 2.4.8); Insert Version history
29/04/2020	Version 2.0 - Revision of the HowTo for Docusnap 11
19/12/2022	Version 3.0 – Revision of the HowTo for Docusnap 12
13/11/2023	Version 4.0 – Revision of the HowTo for Docusnap 13

