★★☆

Basic / Advanced / Expert

Application note

Monthly Email Backup File of spaceLYnk

Configuration guide



Schneider Electric

Safety Information

Important Information

Read these instructions carefully before trying to install, configure, or operate this software. The following special messages may appear throughout this bulletin or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of either symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠DANGER
DANGER indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

⚠WARNING
WARNING indicates a potentially hazardous situation which, if not avoided, can result in death or serious injury.

⚠CAUTION
CAUTION indicates a potentially hazardous situation which, if not avoided, can result in minor or moderate injury.

NOTICE
NOTICE is used to address practices not related to physical injury. The safety alert symbol shall not be used with this signal word.

Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

Note - You will find additional information here to make your work easier.

Safety Precautions

⚠WARNING

HAZARD OF INCORRECT INFORMATION

- Do not incorrectly configure the software, as this can lead to incorrect reports and/or data results.
- Do not base your maintenance or service actions solely on messages and information displayed by the software.
- Do not rely solely on software messages and reports to determine if the system is functioning correctly or meeting all applicable standards and requirements.
- Consider the implications of unanticipated transmission delays or failures of communications links.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information that is contained herein. If you have any suggestions for improvements or amendments or have found errors in this publication, please notify us.

No part of this document may be reproduced in any form or by any means, electronic or mechanical, including photocopying, without express written permission of Schneider Electric.

All pertinent state, regional, and local safety regulations must be observed when installing and using this product. For reasons of safety and to help ensure compliance with documented system data, only the manufacturer should perform repairs to components.

When devices are used for applications with technical safety requirements, the relevant instructions must be followed.

Failure to use Schneider Electric software or approved software with our hardware products may result in injury, harm, or improper operating results.

Failure to observe this information can result in injury or equipment damage.

© 2014 Schneider Electric. All rights reserved

Table of Contents

1 Introduction 6

2 Design 7

3 Configuration 9

3.1.1 Manual backup 9

3.1.2 Manual restore 10

4 Conclusion 11

1 Introduction

This configuration guide describes the process which spaceLYnk will take to create a monthly backup file, then emails it to the user via an external email address.

- Monthly backups provide a useful means of insurance for the user, in case of any unexpected changes to the software, this can include loss of data (objects, visualization and Modbus profiles).

A glossary is available in the appendix chapter of this document. Please refer to it whenever necessary.

Competencies

There are few necessary competencies to follow the procedures mentioned in this configuration guide. It is mandatory to have knowledge of KNX commissioning through ETS, basic spaceLYnk configuration knowledge and a fair knowledge of Lua scripting language in the scope described in the spaceLYnk's User guide.

System prerequisites

Software	Version	Download
spaceLYnk	2.1 and newer	http://www.schneider-electric.com

Table 1: software versions of used software

2 Design

The following script provides the code necessary to implement the monthly backup:

```
--Gmail (smtp) “Sender’s Email address” !IMPORTANT!
user = 'yourgmailaddress'
--Gmail (smtp) “Senders Email Password” !IMPORTANT!
password = 'yourpassword'
--“Reply Email Address” typically same as “Sender’s Email address”
-- Email Alias “from” ie:  “John Smith”
from = ''
alias_from = 'Sender Name'
--E-mail address it is ending to
-- Email Alias “to” ie: “John Smith Office”
to = ''
alias_to = 'Recipient name'
--Subject Titles for e-mail
subjectpart1 = 'Back-up file for spaceLYnk,'..os.readfile('/proc/sys/kernel/hostname')
subjectpart2 = 'automatically sent by spaceLYnk'
image_description = 'Backup from '..os.readfile('/proc/sys/kernel/hostname') -- will
insert hostname
--Message on bottom of email (will only be displayed when the “email client” does not
understand the attachment)
epilogue = 'End of message'
 --------------------------------------------------------
--******************** End of parameters ********************--
--------------------------------------------------------
--********** DON'T CHANGE ANYTHING UNDER THIS LINE **********--
--------------------------------------------------------
ip, mask = get_ip_addr_bin()
ip = bin2str(ip,10,'.')
 subjectpart1 = subjectpart1..ip
--Create table to include mail settings
local settings = {
    from = from,
    rcpt = to,
    user = user,
    password = password,
```

```
    server = 'smtp.gmail.com',
    port = 465,
    secure = 'sslv23',
}
 --Create attachment
src = '/tmp/lm-backup.tar.gz'
dst = 'LM-' .. os.date('%Y.%m.%d') .. '.tar.gz'
os.execute('sh /lib/genohm-scada/web/general/backup.sh')
 --Create subject
subject = subjectpart1 .. ": " .. dst .. " " .. subjectpart2
 --Load required modules to send email with attachment
local smtp = require("socket.smtp")
local mime = require("mime")
local ltn12 = require("ltn12")
 --Create e-mail header
settings.source = smtp.message{
headers = {
          from = '' .. alias_from .. ' ' .. from .. '',
          to = '' .. alias_to .. ' ' .. to .. '',
          subject = subject
},
--Load attachment inside body
body = {
preamble = "",
 [1] = {
      headers = {
         ["content-type"] = 'application/x-7z-compressed',
         ["content-disposition"] = 'attachment; filename="'..dst..'"',
         ["content-description"] = '.. dst ..',
         ["content-transfer-encoding"] = "BASE64",
      },
       body = ltn12.source.chain(
      ltn12.source.file(io.open(src, "rb")),
      ltn12.filter.chain(
      mime.encode("base64"),
      mime.wrap()
        )
      )
```

```
    },
      epilogue = epilogue
  }
}
 --Send the email
r, e = smtp.send(settings)
 --Create alert when sending gives an error with error message
if (e) then
  log (e)
  log (r)
  alert("Could not send email: ", e, "\n")
end
--Delete created backup file from tmp folder inside spaceLYnk
os.remove(src)
```

Please be aware that email servers have limit (usually 10MB) for maximum attachment size. Maximal size of spaceLYnk backup is up to 32MB.

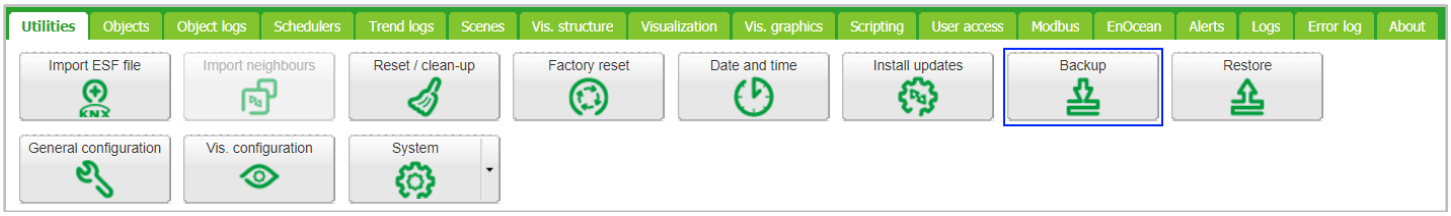
3 Configuration

As well as automatic monthly backup files, the user should also manually create their own backup file when making any changes to spaceLYnk.

3.1.1 Manual backup

To create a manual backup file, please follow these instructions:

1. In spaceLYnk Configurator, proceed to Configurator → Utilities
2. Select the Backup option as highlighted below.



3. Once clicked, spaceLYnk will create a (*.tar.gz), the filename will contain device hostname the date and time at which it was created.

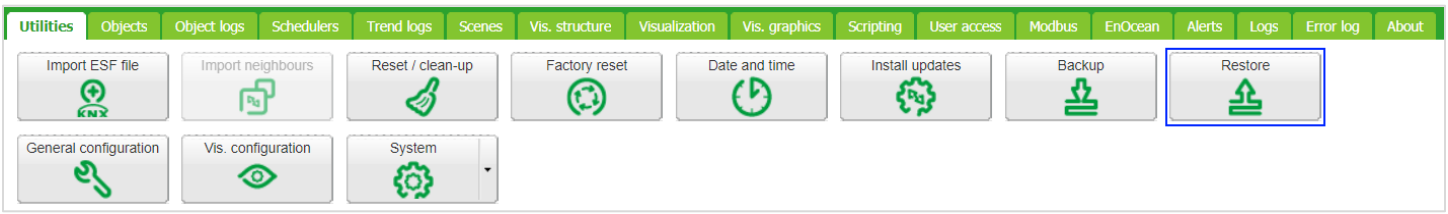
4. Inside the zip file contains the applications within spaceLYnk at the time of creation, such applications include: Modbus profiles, visualization icons and images.

This (*.tar.gz), can be loaded by spaceLYnk to restore itself to its state at the time and date of which the loaded (*.tar.gz) file was created.

3.1.2 Manual restore

To perform a manual restore of spaceLYnk please follow these instructions:

1. In spaceLYnk's Configurator, proceed to Configurator → Utilities
2. Select the Restore option as highlighted below:



3. Select the relevant (*.tar.gz) to load
4. Once Selected, click Save
5. spaceLYnk will then load the file selected, upon completion a message will appear saying that the device will reboot in 5 seconds, and the backup will be restored when the system starts.

Logout and close the browser window to ensure after this process. Clear browser's cache. (Ctrl+F5).

4 Conclusion

spaceLYnk can create a monthly backup file, which can be emailed to the user to an external email address. In conjunction with this capability, spaceLYnk give the user the ability to manually create a backup file or perform a manual restore of the device, using any previously created backup files.

Schneider Electric Industries SAS
Head Office 35, rue Joseph Monier 92506 Rueil-Malmaison Cedex France http://www.schneider-electric.com