

# *Training of Collection of data from GISC Tokyo on Internet - Subscription -*

*- Objective -*

*Learn how to access and retrieve data in GISC Tokyo's cache*

*by using GUI software*

*by using shell script*



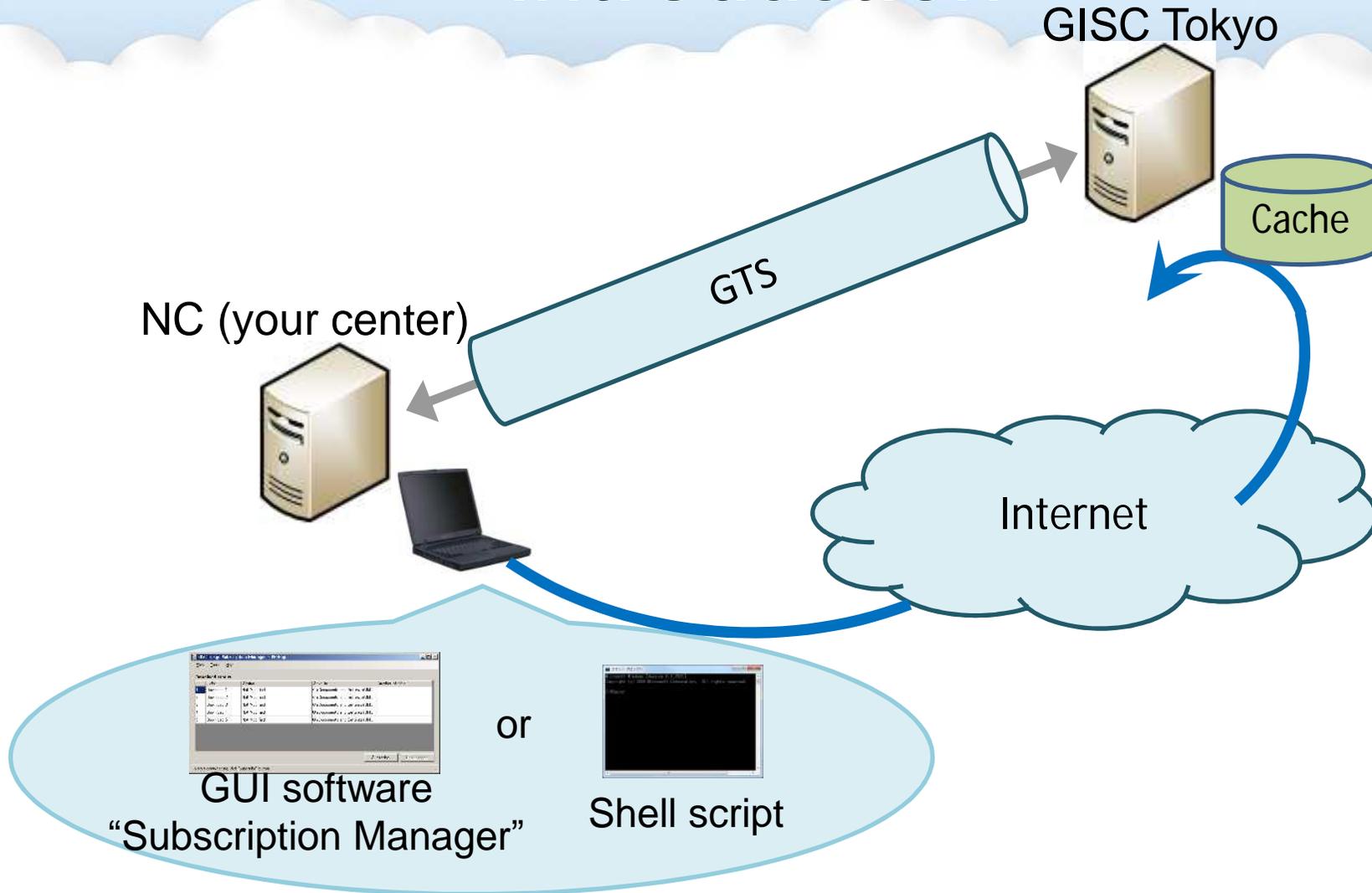
*Yasutaka HOKASE*

*WIS Workshop in JMA*

*18<sup>th</sup> November, 2014*



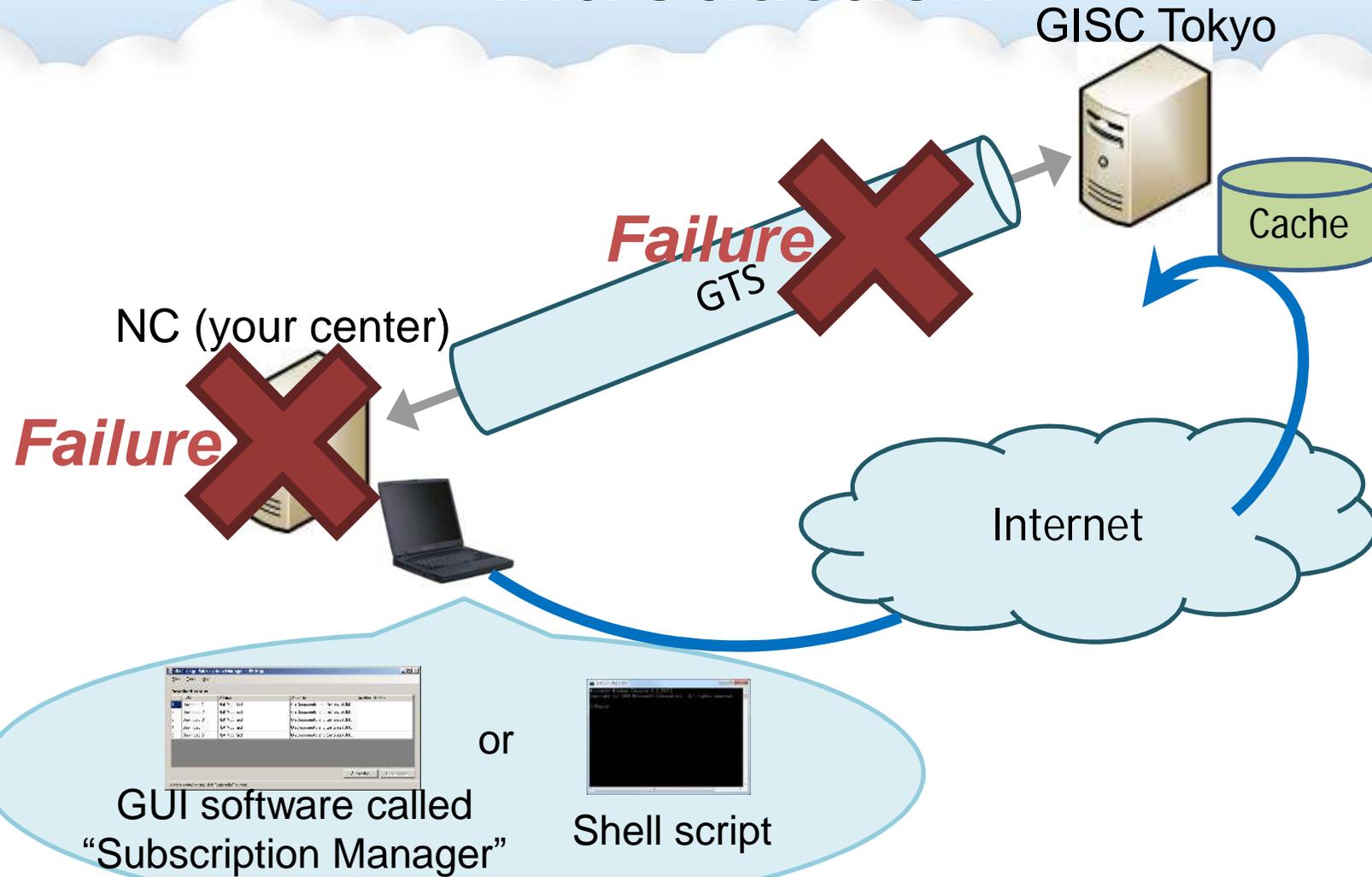
# Introduction



You can get whatever you choice and whenever you need.



# Introduction

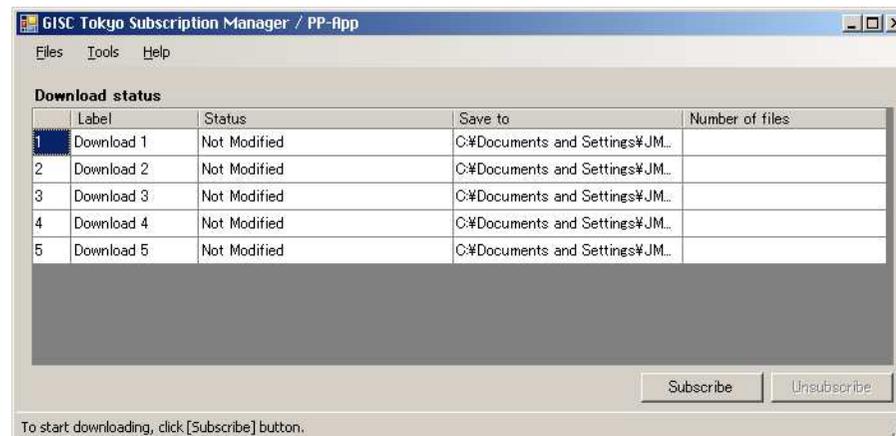


Of course, you can get data even during an outage of GTS or your Message Switching System.



# Subscription Manager

- Easy to configure download setting with its simple GUI.
- Once you run the software, data will be automatically downloaded.
- Available from GISC Tokyo website.  
[http://202.32.195.141/wisapp/?page\\_id=259](http://202.32.195.141/wisapp/?page_id=259)



# Feature of Subscription Manager

- Easy to setup.
- Easy to configure download setting with simple GUI.
- 5 download settings in one program.
- No additional program.
- Automatic delete function.

## Requirements

- Microsoft Windows 7
- Microsoft .net framework 4.
  - Available at Windows Update or Microsoft website.
- Hard disk space for accumulating data files.



***Let's move on to Practical Training!***



# Step 1 - Get “Subscription Manager”

“Subscription Manager” is available on this website.

[http://202.32.195.141/wisapp/?page\\_id=259](http://202.32.195.141/wisapp/?page_id=259)

- Download “Subscription Manager” from the above URL.
- Copy the downloaded zip file anywhere. (e.g. on desktop)
- Unzip the file.

Click here & download it.

**WIS Application Pilot Project**

HOME SOFTWARE APPLICATIONS >> CONTACT PARTICIPANTS

Browse: Home / Software applications / Automatic data acquisition / GISC Tokyo  
Subscription Manager  
**GISC Tokyo Subscription Manager**

“GISC Tokyo Subscription Manager” is automatic data acquisition program for GISC cache of GISC Tokyo. The Feature is ...

- Easy setup.
- Easy download setting with simple GUI.
- 5 download settings in one program.
- No additional program.
- Automatic delete function.
- And more...

**Requirements**

- Microsoft Windows XP SP3 or higher.
- Microsoft .net framework 4. (Available at Windows Update or Microsoft website)
- Hard disk space for accumulating data files.

**History**

- 2013/01/07 First Release
- 2013/06/14 Improvement of operability of “Download Settings”
- 2013/08/20 Bug fix

**Download “Subscription Manager”**

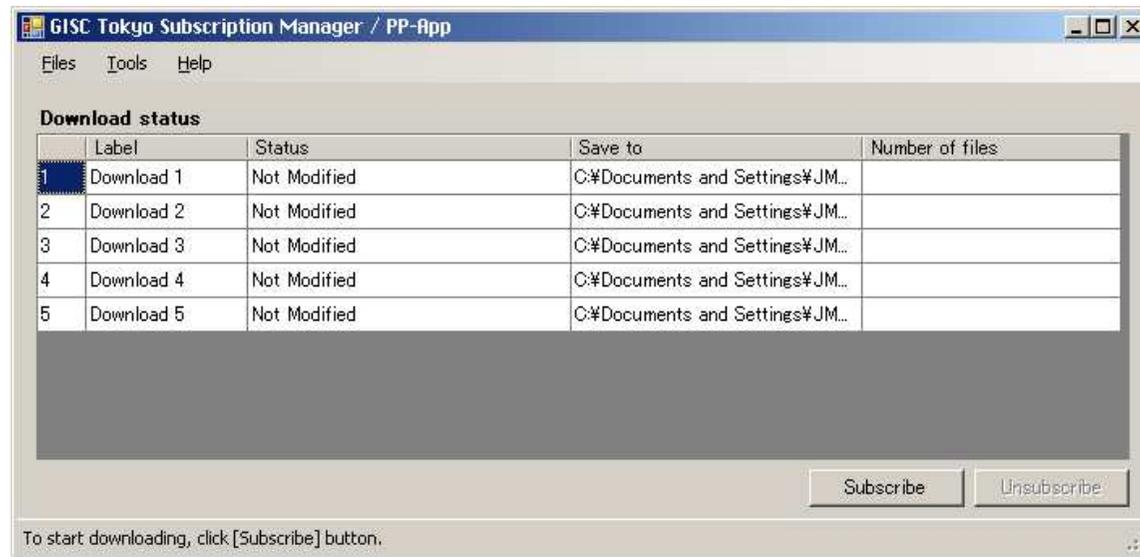
# Step 2 - Run “Subscription Manager”

- Double click the program icon in the unzipped folder.



Subscription\_Manager.exe  
GISC Tokyo Subscription Manage...  
Japan Meteorological Agency

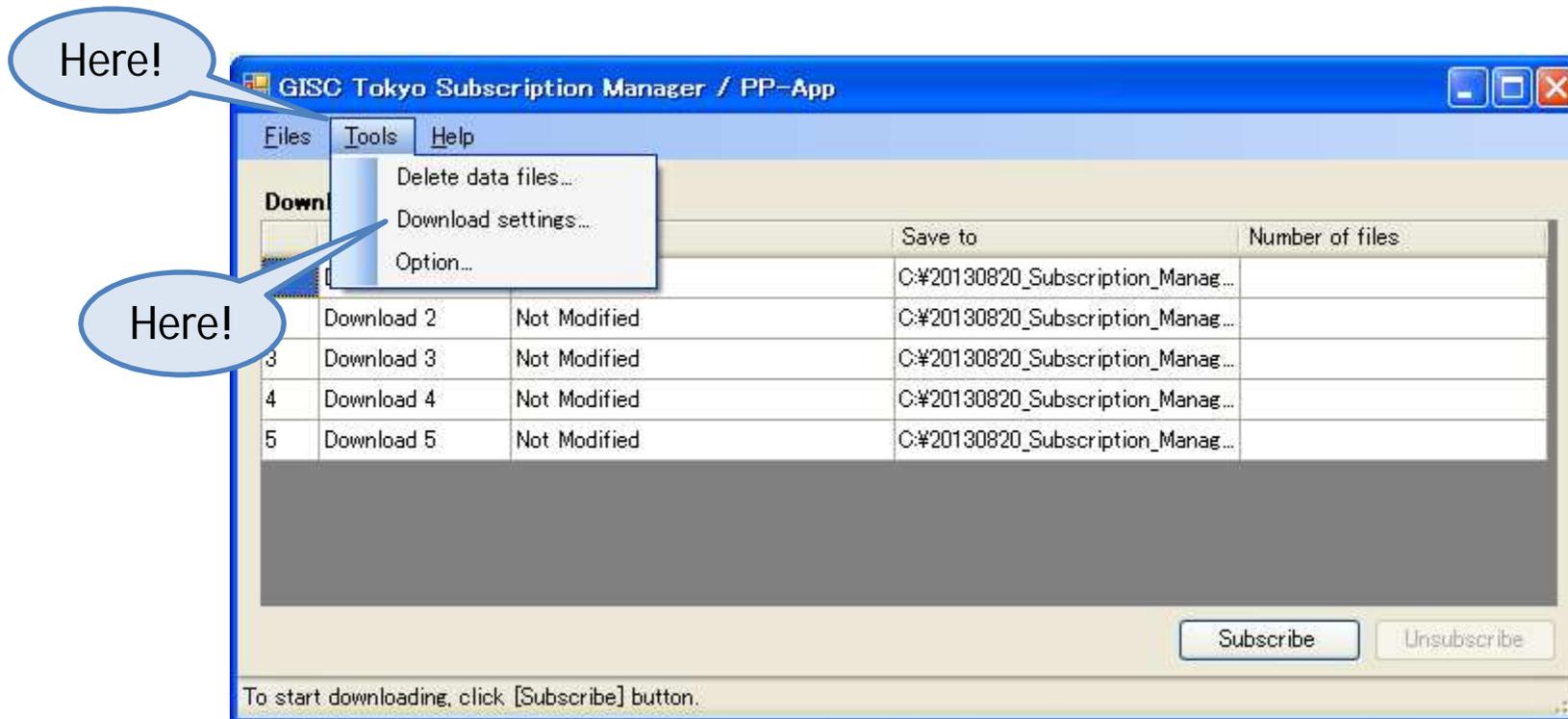
Then, main window will appear.



# Step 2 - Configure download setting

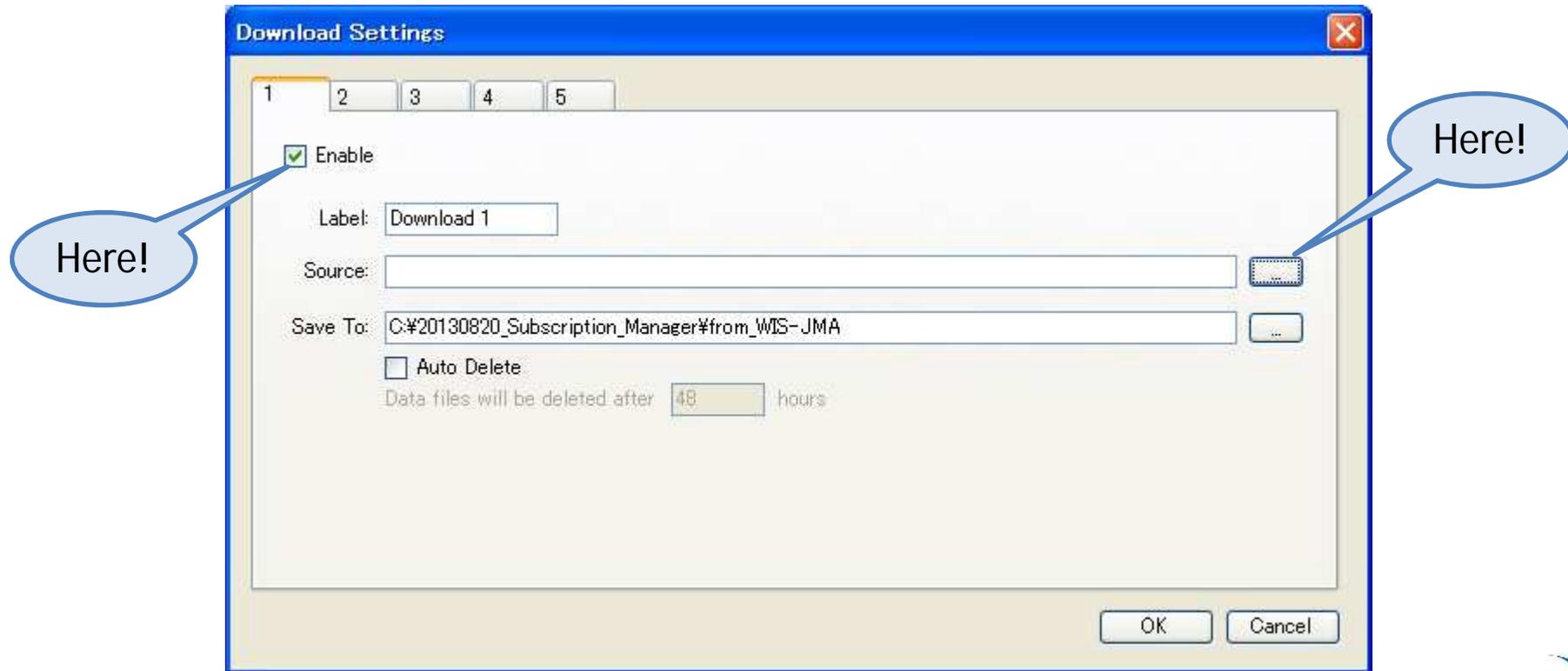
*This time,  
Configure setting to download "SYNOP" for all area in WMO format.*

- In the main window, click on Tools menu and Download settings.



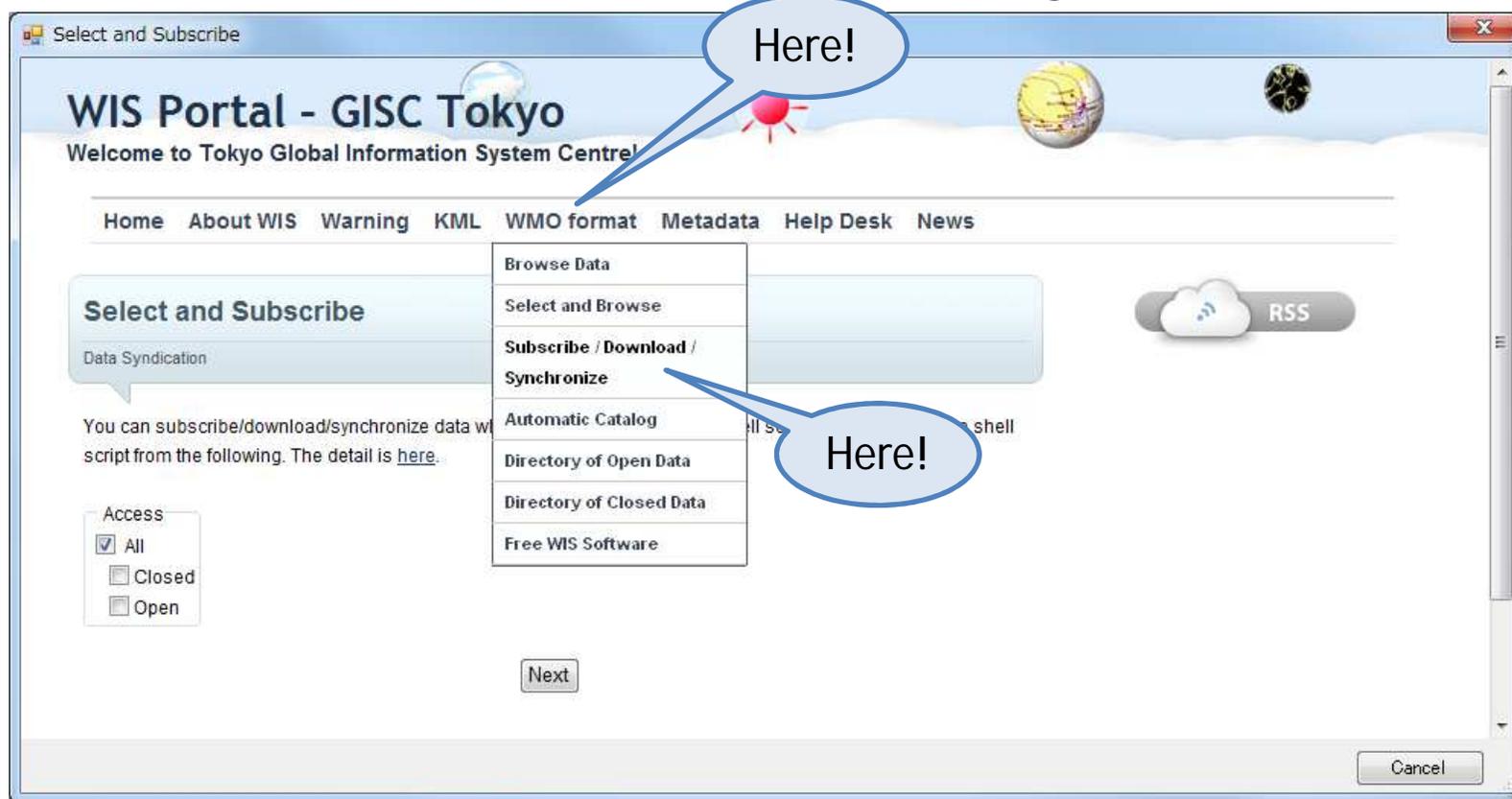
# Configure download setting

- Click on Enable check box and “...” button at the end of Source line.



# Select WMO format

- Select “WMO format” and click on “Subscribe/Download/Synchronize”.



# Check “Access” category

- Click on “Open” check box and “Next” button.



# Select data type...

- Click on “Surface” radio button and “Next” button.

WIS Portal - GISC Tokyo  
Welcome to Tokyo Global Information System Cent

Home About WIS Warning KML WMO form

Open

Data Syndication

Type / Category or Discipline

Alphanumeric

- Analysis
- Aviation
- Climate
- Empty or Invalid
- Forecast
- Oceanographic data
- Satellite
- Surface
- Upper air
- Warning

BUFR

- Analysis
- Climate
- Empty or Invalid
- Forecast
- Oceanographic data
- Satellite
- Surface
- Upper air

CREX

- Cyclone
- Empty or Invalid
- Physical/chemical constituents
- Surface
- Upper air

GRIB

- Global Spectral Model

Back Next

Here!

Here!

GISC Tokyo/Japan Meteorological Agency

# Select Type, Subcategory, Region

Click on "Surface" radio button and "Next" button.

Click "SYNOP" and "All" check boxes and "Next" button.

The image displays two screenshots of the WIS Portal - GISC Tokyo subscription manager interface, illustrating the steps to select a type, subcategory, and region.

**Step 1:** Click "Surface" radio button. The screenshot shows the "Open" section with "Data Syndication" and a list of "Type / Category or Discipline" options. The "Surface" radio button is selected.

**Step 2:** Click "Next" button. The screenshot shows the "Open Alphanumeric Surface" section with "Data Syndication" and a list of "Subcategory" options. The "Surface" radio button is selected.

**Step 3:** Check "SYNOP" checkbox. The screenshot shows the "Subcategory" section with a list of options. The "SYNOP" checkbox is checked.

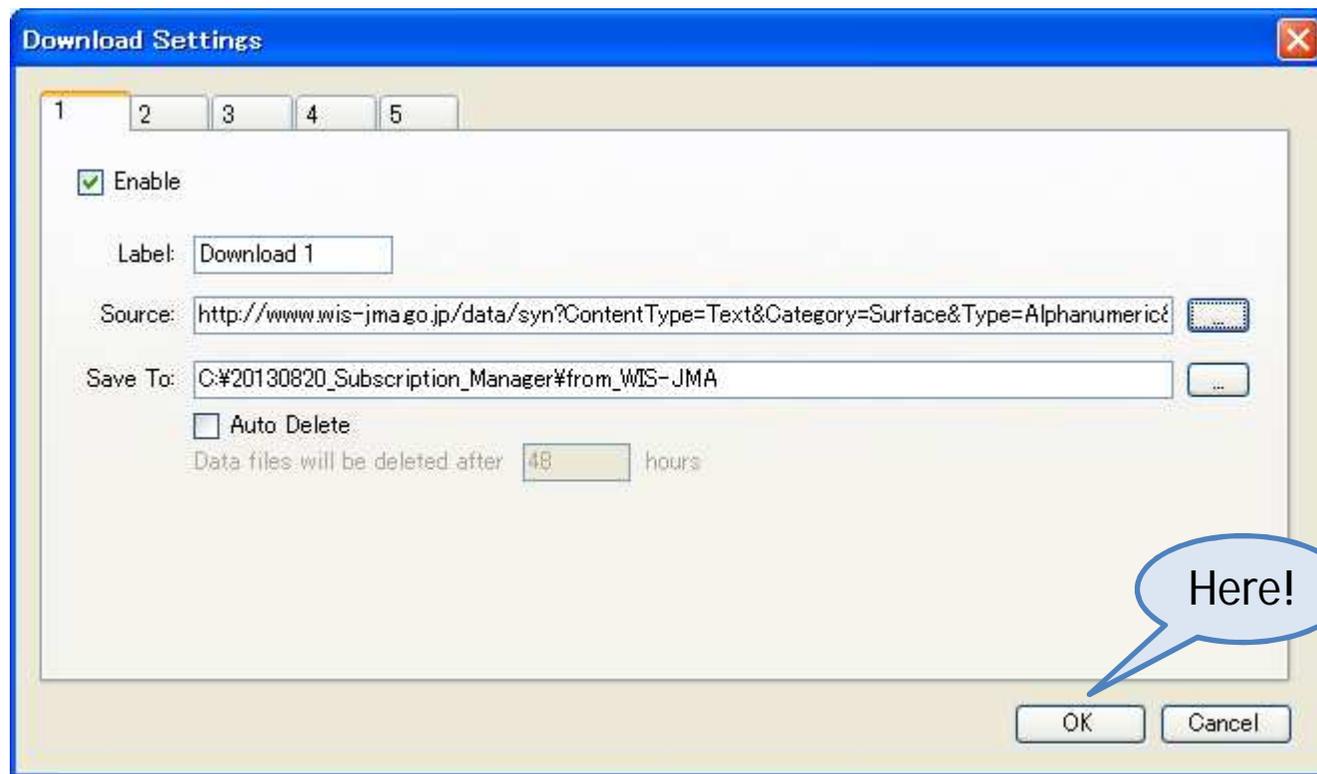
**Step 4:** Check "All" checkbox. The screenshot shows the "Region of Center" section with a list of options. The "All" checkbox is checked.

**Step 5:** Click "Next" button. The screenshot shows the "Region of Center" section with a list of options. The "All" checkbox is checked.

The interface includes a navigation menu (Home, About WIS, Warning, KML, WMO format) and a "Location of Center or Exclusive location of Center" dropdown menu. The "Back" and "Next" buttons are visible at the bottom of the form.

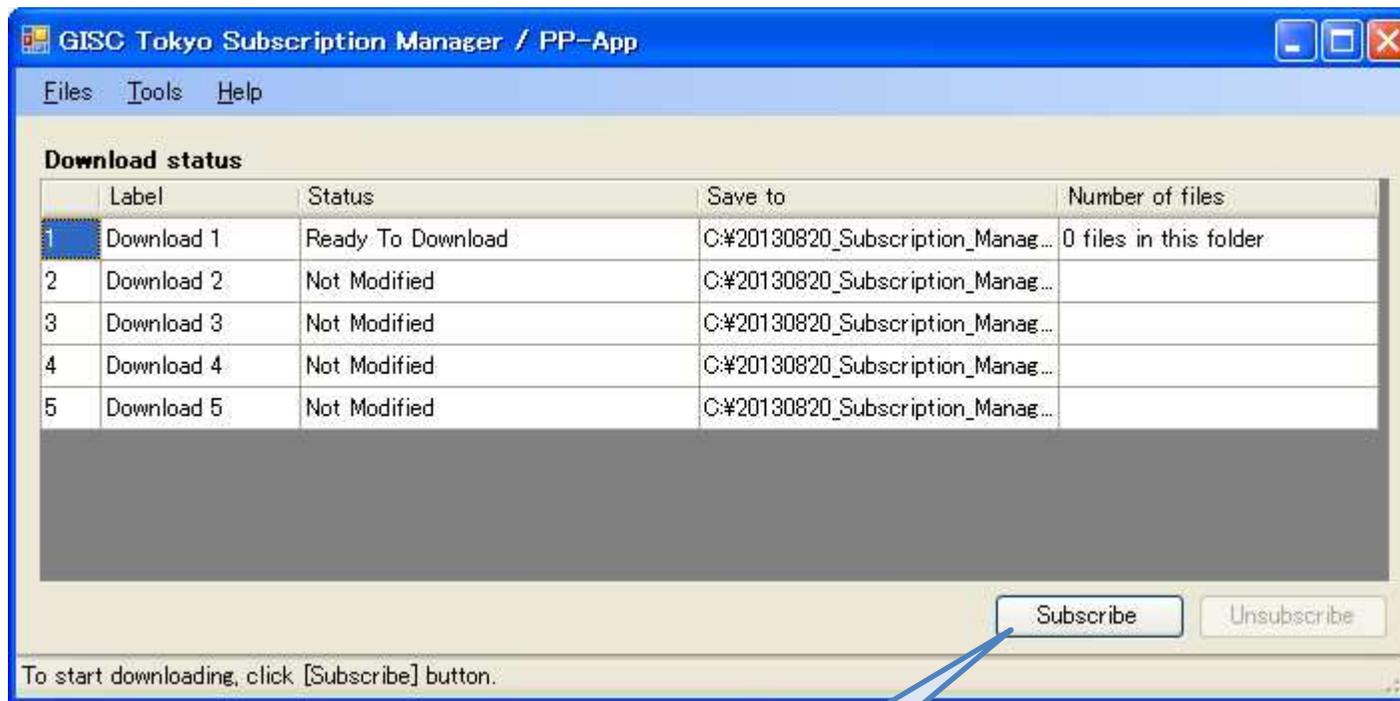
# Save the configuration

- Click on OK button at the bottom.



# Step 3 - Start subscribe

- Click on Subscribe button to start download.



Here!



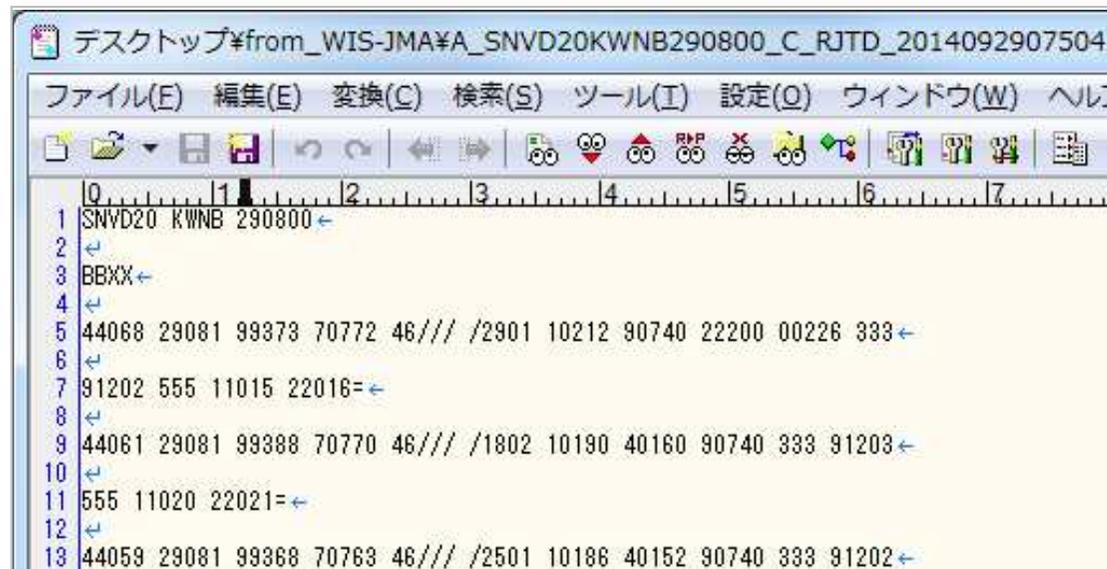
# Open downloaded data

- Data will be downloaded into “from\_WIS-JMA” folder in the folder where the program icon is.

from\_WIS-JMA

A\_SNVD20KWNB290800\_C\_RJTD\_20140929075047\_71.txt

Double click to open the downloaded data with text editor!



デスクトップ¥from\_WIS-JMA¥A\_SNVD20KWNB290800\_C\_RJTD\_20140929075047

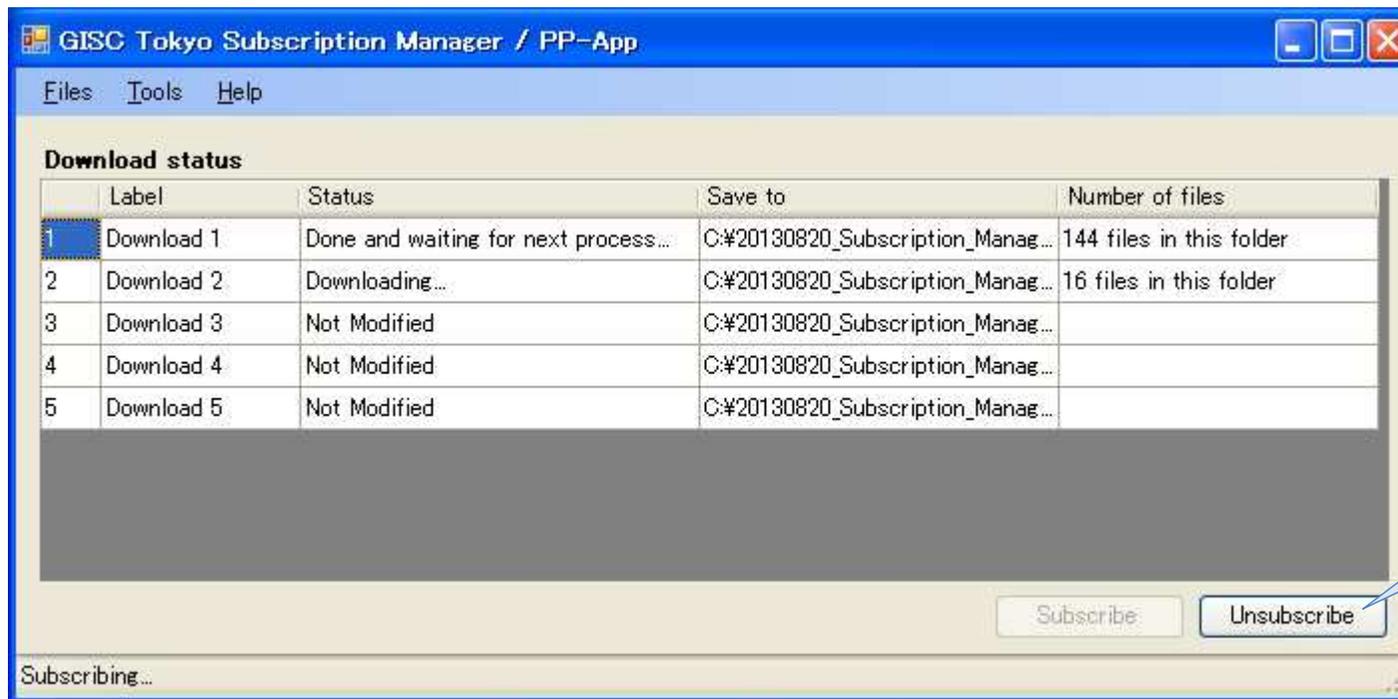
ファイル(E) 編集(E) 変換(C) 検索(S) ツール(T) 設定(O) ウィンドウ(W) ヘルプ

```
1 SNVD20 KWNB 290800 ←
2 ←
3 BBXX ←
4 ←
5 44068 29081 99373 70772 46/// /2901 10212 90740 22200 00226 333 ←
6 ←
7 91202 555 11015 22016= ←
8 ←
9 44061 29081 99388 70770 46/// /1802 10190 40160 90740 333 91203 ←
10 ←
11 555 11020 22021= ←
12 ←
13 44059 29081 99368 70763 46/// /2501 10186 40152 90740 333 91202 ←
```



# Unsubscribe

- Click on Unsubscribe button to stop download.



Here!



# Introduction -use script-

My system comprises  
Linux server.

But Subscription Manager  
runs on only Windows.

How do I load data  
into Linux server?

Another alternative is to make script.



# Make Script



- Don't worry. We have a Wizard for making script at "WIS Portal - GISC Tokyo"  
<http://www.wis-jma.go.jp/>  
You don't have to make script from scratch.



# Advantages of using script



Script runs on

- Linux - /bin/sh
- Windows - PowerShell 2.0



If your existing system comprises Linux server, you can easily load data into your system.



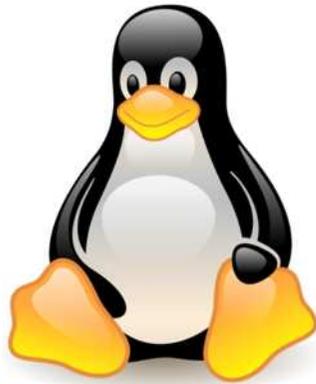
You can remake script just the way you want.



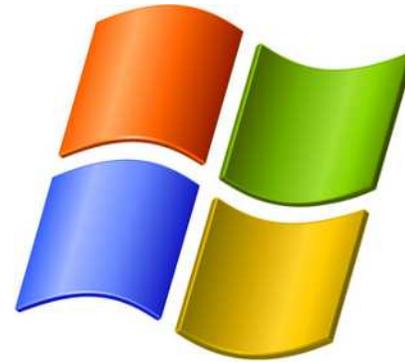
Finer granularity



# Step 1. Preparation



Always ready to subscribe...



Download and setup following software before you start.

- Wget  
(<http://www.gnu.org/software/wget/>)



# Step 2. Make script by Wizard

*This time,  
Configure setting to download “SYNOP” for all area in WMO format.*

Access GISC Tokyo web site

<http://www.wis-jma.go.jp/cms/>

or

google “GISC Tokyo”



# Script

## Wizard for making script at "WIS Portal - GISC Tokyo"

The image shows a sequence of three screenshots from the WIS Portal wizard, with callouts and arrows indicating the steps to follow:

- Step 1:** The first screenshot shows the "WMO format" and "Metadata" options circled in pink. A callout bubble says "Here!". Below it, the "Subscribe / Download" and "Synchronize" options are circled in pink. Another callout bubble says "Here!".
- Step 2:** The second screenshot shows the "Select and Subscribe" screen. The "Open" option under the "Access" section is circled in pink. A callout bubble says "Check 'Open'". Below it, a pink arrow points to the "Open" option with the text "Check 'Access' category".
- Step 3:** The third screenshot shows the "Open Alphanumeric Surface" screen. The "Surface" option under "Type / Category or Discipline" is circled in pink. A callout bubble says "Check 'Surface'". Below it, a pink arrow points to the "Surface" option with the text "Check data type".
- Step 4:** The fourth screenshot shows the "Open Alphanumeric Surface" screen. The "SYNOP" option under "Subcategory" is circled in pink. A callout bubble says "Check 'SYNOP'". Below it, the "All" option under "Region of Center" is circled in pink. A callout bubble says "Check 'All'". A pink arrow points to these options with the text "Check Subcategory and Region".



# Verify your Information

Select and Subscribe

www.wis-jma.go.jp/data/subscribe3?Access=Open&Type=Alphanumeric&Category=Surface&Subcategory=SYNOP&Region=&Location=

## WIS Portal - GISC Tokyo

Welcome to Tokyo Global Information System Centre!

Home About WIS Warning KML WMO format Metadata Help Desk News

Category="Surface" Type="Alphanumeric" Access="Open"  
Subcategory="SYNOP"

Data Syndication

Data Information

total file size per day (Yesterday): 5391591 (bytes)

total number of files per day (Yesterday): 9683

Your Information

download utility: Aria2 (aria2c for Linux, aria2c for Windows) or Wget (wget for Linux, wget for Windows)

OS and shell: Linux Bash and Aria2

directory of wget(,exe) or aria2c(,exe): /usr/bin

limit speed of download: 128kBytes/sec (1Mbits/sec)

local directory to store download files: from\_WIS\_IMA

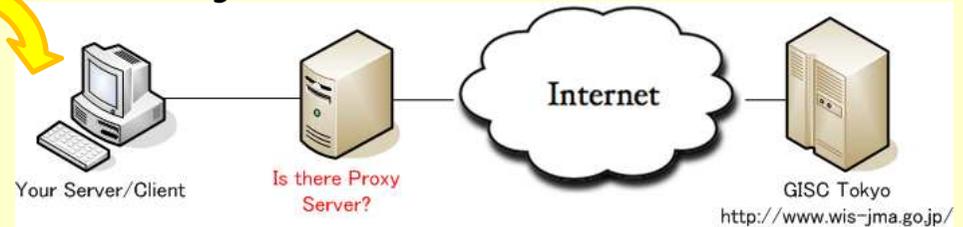
proxy server: proxy port number:

Back Show sample shell script to download files

This time,

- OS and shell: **Windows PowerShell and Wget**

## Check your Internet connection

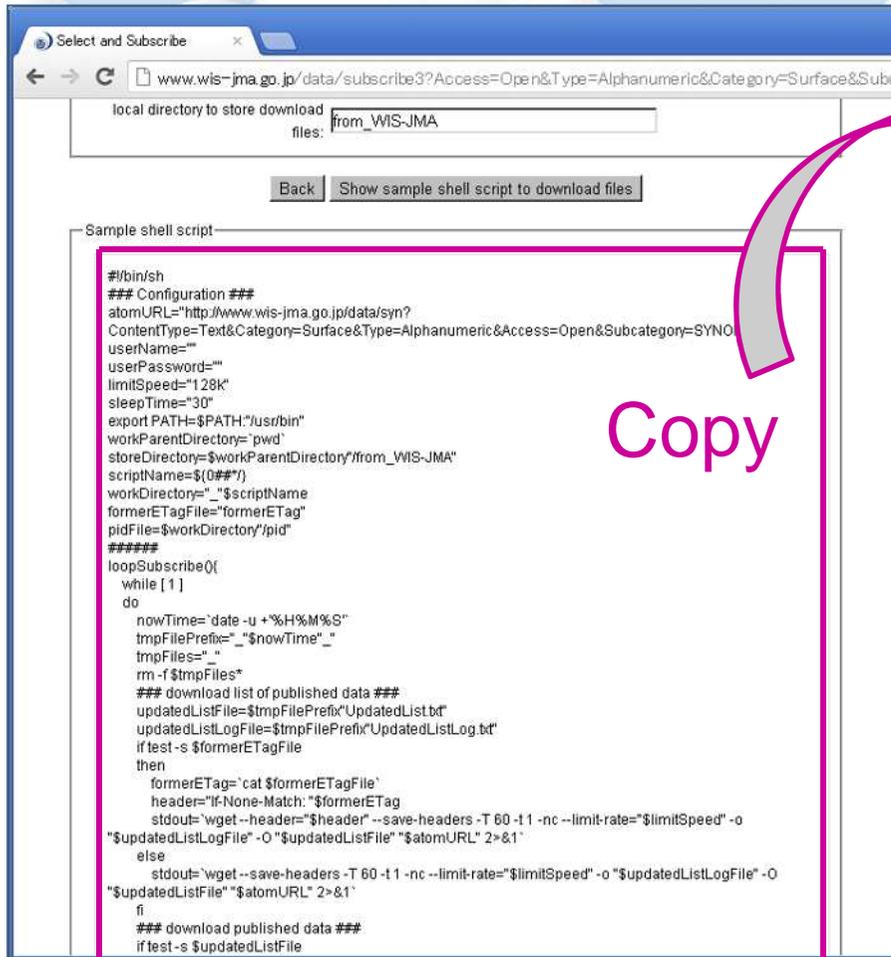


If you are behind the proxy,  
check wget "http\_proxy" setting.

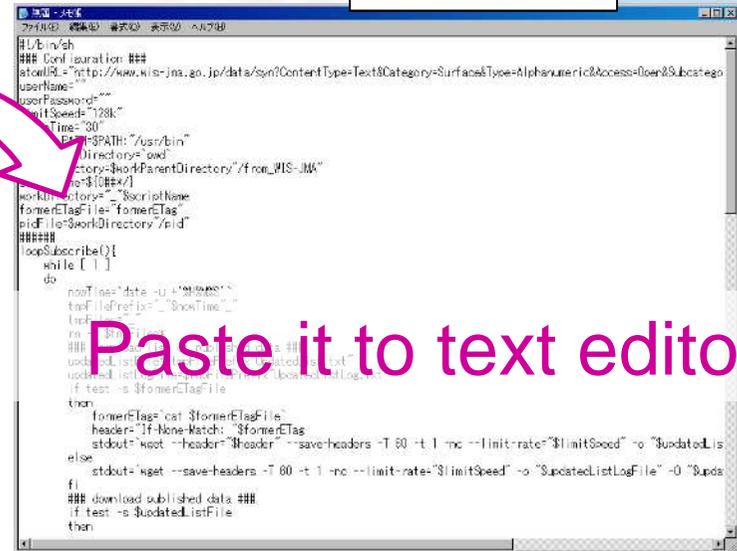
- Linux ~/.wgetrc
- Windows .wgetrc (@ wget installed folder)

# Copy, Paste, Save

Text Editor



Copy



Paste it to text editor

Save as "download.ps1"

Filename

on desktop

• Linux

Any name is Okay.  
e.g. "download.sh"

• Windows

Extension must be ".ps1"  
e.g. "download.ps1"

# Change execution policy of PowerShell

- Open “Windows PowerShell” as administrator

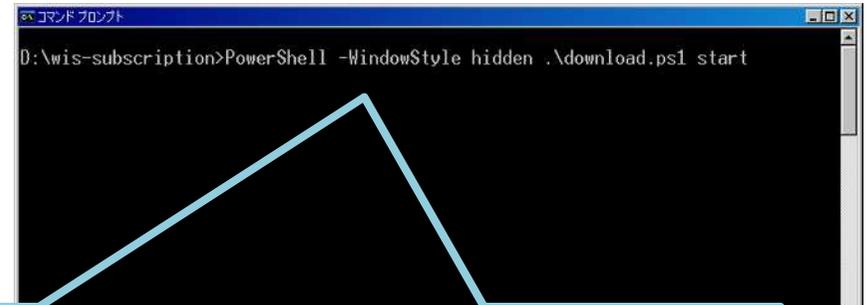
Type the following red-letter.

- PS C:¥> Get-ExecutionPolicy
  - (Get current setting)
  - Restricted ← default setting
- PS C:¥> Set-ExecutionPolicy RemoteSigned
  - (Change setting)
- PS C:¥> Get-ExecutionPolicy
  - RemoteSigned



# Step 3. Run script

Open "Command Prompt" and go to folder with script.  
If you saved script on desktop, type "cd desktop".



```
コマンド プロンプト
D:\wis-subscription>PowerShell -WindowStyle hidden .\download.ps1 start
```

## *Command to run script*

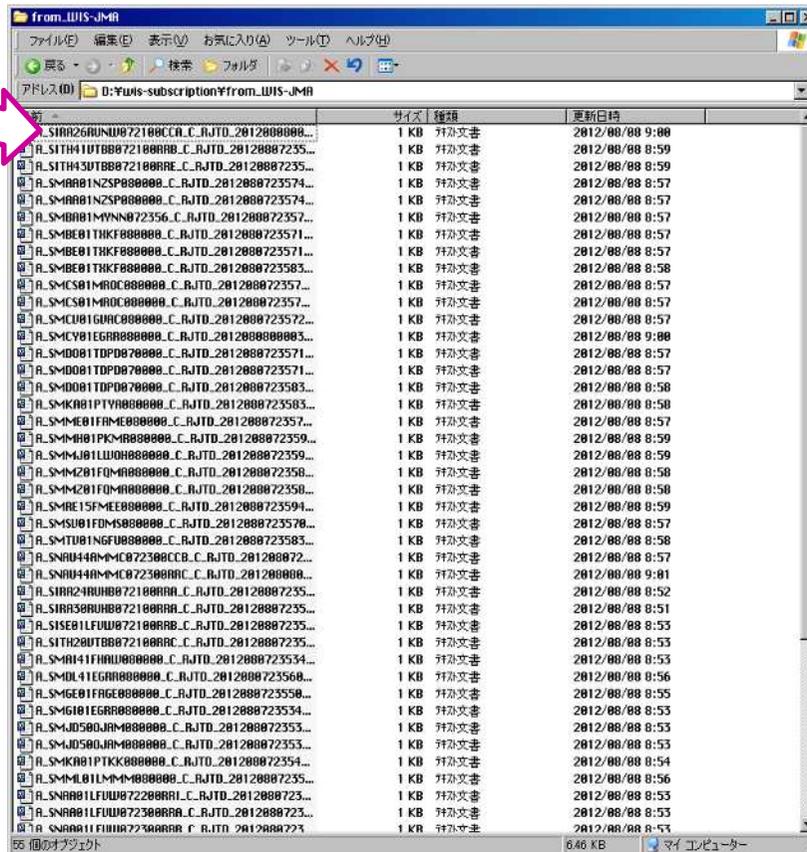
```
PowerShell -WindowStyle hidden ./download.ps1 start
```

- Linux
  - Open "Console" and go to directory with script.
  - \$ sh ./download.sh start > /dev/null 2>&1 < /dev/null &
- Windows
  - Open "Command Prompt" and go to folder with script.
  - PowerShell -WindowStyle hidden ./download.ps1 start



# And get data files...

A new folder “from\_WIS\_JMA” is created.



Data are being downloaded into the folder “from\_WIS\_JMA” automatically.



# Unsubscribe

- Linux

- Open "Console" and go to directory with script.
- \$ sh ./download.sh stop

- Windows

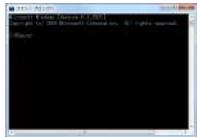
- Open "Command Prompt" and go to folder with script.
- PowerShell ./download.ps1 stop



# Summary



- ‘Subscription Manager’
  - easy to setup and configure settings
  - runs on only Windows.



- Script
  - runs on Linux and Windows.
  - You can remake the script just the way you want in order to load data into your existing system (e.g. Message Switching System ...etc.)
  - finer granularity



# For further convenience

- If ‘Subscription Manager’ or ‘Wizard’ had an additional function of making **WMO FTP file format** from downloaded data, you could load data into your existing Message Switching System more easily?

If necessary,  
JMA will consider adding a function of making  
**a WMO FTP file format** to ‘Subscription  
Manager’.



# Other (SATAID & GSM)



Satellite data is available via SATAID service (<http://www.wis-jma.go.jp/cms/sataid/app/download/>) with another download tool.



JMA High-Resolution GSM data is available here <http://www.wis-jma.go.jp/cms/gsm/>







- Reference manual pages -



## Subscription – Make Script-

# Wizard for making script at “WIS Portal - GISC Tokyo”

The wizard consists of three main steps:

- Step 1: Select and Browse**
  - Format: **WMO format** (highlighted)
  - Action: **Subscribe / Download / Synchronize** (highlighted)
  - Access:  All,  Closed,  Open
- Step 2: Select and Subscribe**
  - Section: **Open** (Data Syndication)
  - Type / Category or Discipline:
    - Alphanumeric:
      - Analysis
      - Aviation
      - Climate
      - Empty or Invalid
      - Forecast
      - Oceanographic data
      - Satellite
      - Surface
      - Upper air
      - Warning
    - BUFR:
      - Analysis
      - Climate
      - Empty or Invalid
      - Forecast
      - Oceanographic data
      - Satellite
      - Surface
      - Upper air
    - CREX:
      - Cyclone

- Step 3: Open Alphanumeric Surface**
- Section: **Open Alphanumeric Surface** (Data Syndication)
- Subcategory:
  - All
  - BUOY
  - Empty
  - Miscellaneous
  - RADOB
  - Sea level data and deep-ocean tsunami data
  - Seismic data
  - SHIP
  - SYNOP
  - SYNOP MOBIL
  - WAVEOB
- Region of Center:
  - All
  - Africa
  - Asia
  - Europe
  - North America, Central America and the Caribbean
  - South America
  - South-West Pacific
- Location of Center or Exclusive location of Center: \_\_\_\_\_

Annotations with arrows point to the highlighted elements in each step:

- Check “Access” category
- Check data type
- Check Subcategory and Region



## Subscription – Make Script-

# Wizard for making script at “WIS Portal - GISC Tokyo”

Home About WIS Warning KML WMO format Metadata Help Desk News

Category="Surface" Type="Alphanumeric" Access="Open"  
Subcategory="SYNOP"

Data Syndication

Data Information

total file size per day (Yesterday): 5391591 (bytes)

total number of files per day (Yesterday): 9683

Your Information

download utility: Aria2 (aria2c for Linux, aria2c for Windows) or Wget (wget for Linux, wget for Windows)

OS and shell: Linux Bash and Aria2

directory of wget (exe) or aria2c (exe): /usr/bin

limit speed of download: 128kBytes/sec (1Mbits/sec)

local directory to store download files: from\_WIS-JMA

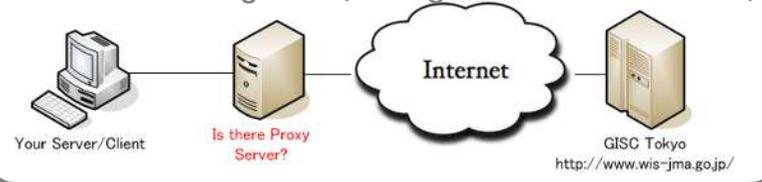
proxy server: proxy port number:

Back Show sample shell script to download files

### Verify your information

If you are behind the proxy, check wget "http\_proxy" setting.

- Linux ~/.wgetrc
- Windows .wgetrc (@ wget installed folder)



local directory to store download files: from\_WIS-JMA

Back Show sample shell script to download files

```
Sample shell script
#!/bin/sh
### Configuration ###
atomURL="http://www.wis-jma.go.jp/data/syn?
ContentType=Text&Category=Surface&Type=Alphanumeric&Access=Open&Subcategory=SYNOP"
userName=""
userPassword=""
limitSpeed="128k"
sleepTime="30"
export PATH=$PATH:/usr/bin
workParentDirectory="pwd"
storeDirectory=$workParentDirectory/from_WIS-JMA"
scriptName=${0##*/}
workDirectory="."$scriptName
formerETagFile="formerETag"
pidFile=$workDirectory/pid"
#####
loopSubscribe()
while [ 1 ]
do
nowTime=`date -u +%H%M%S`
tmpFilePrefix="_$nowTime_"
tmpFiles=" "
rm -f $tmpFiles"
### download list of published data ###
updatedListFile=$tmpFilePrefix/UpdatedL
updatedListLogFile=$tmpFilePrefix/Updat
if test -s $formerETagFile
then
formerETag=`cat $formerETagFile`
header="If-None-Match: $formerETag"
stdout=`wget --header=$header --save
"$updatedListLogFile" -O "$updatedListFile" "$
else
stdout=`wget --save-headers -T 60 -t 1 -
"$updatedListFile" "$atomURL" 2>&
fi
### download published data ###
then
formerETag=`cat $formerETagFile`
header="If-None-Match: $formerETag"
stdout=`wget --header=$header --save-headers -T 60 -t 1 -nc --limit-rate=$limitSpeed" -O "$update
fi
### download published data ###
if test -s "$updatedListFile"
then
```

Copy script and paste it.

Save your script.

Script file name

- Linux  
Any name is Okay. (ex: "download.sh")
- Windows  
Extension must be ".ps1". (ex: "download.ps1")

## Subscription – Make Script-

### Preparation



#### Linux

- The Subscription uses `pwd`, `date`, `ls`, `wget`, `grep`... But these commands are always installed. If you don't have these command, please setup using with package manager in your system.



#### Windows

- Download and setup following software before you start, if you don't have them.
  - Power Shell 2.0 (<http://www.microsoft.com/powershell>)
  - wget (<http://www.gnu.org/software/wget/>)
- Change execution policy.  
Because PowerShell script can't run for security by default, we need to change the policy.
  - Open "Windows PowerShell" **as an administrator**
    - PS C:¥> Get-ExecutionPolicy
    - (Get current setting)
    - Restricted
  - PS C:¥> Set-ExecutionPolicy RemoteSigned
    - (Change setting)
  - PS C:¥> Get-ExecutionPolicy
    - RemoteSigned



## Subscription – Make Script-

### Start subscribe...



#### Linux

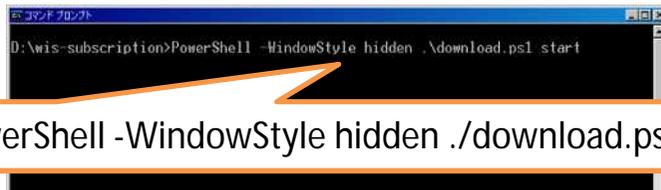
- Open "Console" and go to directory with script.
- \$ sh ./download.sh start > /dev/null 2>&1 < /dev/null &



#### Windows

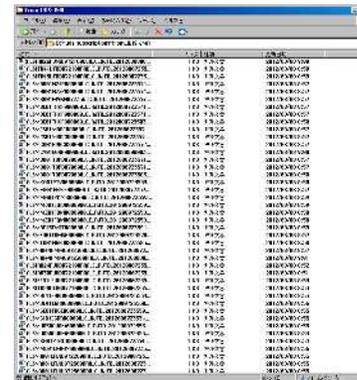
- Open "Command Prompt" and go to folder with script.
- PowerShell -WindowStyle hidden ./download.ps1 start

### Run script & get data



```
D:\wis-subscription>PowerShell -WindowStyle hidden ./download.ps1 start
```

PowerShell -WindowStyle hidden ./download.ps1 start



### Unsubscribe



#### Linux

- Open "Console" and go to directory with script.
- \$ sh ./download.sh stop



#### Windows

- Open "Command Prompt" and go to folder with script.
- PowerShell ./download.ps1 stop



# User Registration

- ID & Password are required for downloading “Closed” data.
- How to register

Application for DAR Service of GISC Tokyo

Under following conditions, I (hereafter referred to as user) hereby apply for user registration on the Data Discovery and Service (DAR) portal of the Global Information System Centre (GISC) Tokyo, operated by Japan Meteorological Agency (JMA).

a. Costs  
JMA provides information intended for global exchange and other relevant data (hereafter "information"), free of charge, while the Applicant will cover all costs involved in accessing the data, including costs incurred for Applicant's computer system and communications.

b. The condition  
Registered users may access to information with use condition. The Applicant must understand and adhere to these conditions:  
a) Resolution 40 (C-2002) allows WMO Members to identify certain "additional data" that may not be reexported for commercial use.  
b) Aeronautical information controlled by ICAO may not be redistributed to the third party.

c. Disclaimers  
a) JMA does not guarantee the overall quality of service and content of information.  
b) JMA assumes no liability or responsibility for any problems arising from the access to information or its use.

d. Alteration of service  
a) JMA reserves the right to terminate the data provision service with prior notification.  
b) Contents or format of the information service may change without prior notification.  
c) JMA reserves the right to take necessary actions to change the service to good condition, including suspension or revocation of use, in the event of the use conditions of information or access to data is observed.

(Applicant) (Designation of PR to WMO\*)  
Name: \_\_\_\_\_ Name: \_\_\_\_\_  
Position: \_\_\_\_\_ Position: \_\_\_\_\_  
Affiliation: \_\_\_\_\_ Country/region: \_\_\_\_\_  
E-mail address: \_\_\_\_\_ Date: \_\_\_\_\_

\* By submitting meteorological service started

**Submit application**

- From PR



**Receive**

- User ID
- Password



**Ready to go**

- Additional data
- DCPC services

more information

<http://www.wis-jma.go.jp/cms/about-wis/registration/>