Prerequisite Packages Installation for Windows Users

NOAA's CPC International Desks

System requirements to run CPC International Desks tools

- **OS version:** Windows (32 or 64 bit, Windows version 7.0 or above) + Cygwin
- **Memory:** 4GB or more (if possible)
- Free disk space: 10GB or more
- Internet connection
- Winzip or 7-zip utility to unpack a tar file
- Software:
 - GrADS (v2.0.x or later)
 - \circ wget
 - \circ curl
 - GNU precision calculator (bc)
 - o GDAL
 - o unzip
 - ImageMagick

1) Go to the website: <u>https://cygwin.com/install.html</u>

2) Depending on your system type, click on either the 64-bit or 32-bit link to download the installation file (**setup-x86_64.exe** for 64 –bit system or **setup-x86.exe** for 32-bit.



Look for the setup file in your download folder, and double click on it to initiate the Cygwin installation: Setup-x86_64

1) Click on **Next** to go to the next step



2) Click on **Next** to install from Internet

recommended selection

1) Click on Next to proceed with the 2) Click on Next to proceed with the default installation location

Cygwin Setup - Choose Installation Directory -		×	E Cygwin Setup - Select Local Package Directory	- [
Select Root Install Directory Select the directory where you want to install Cygwin. Also choose a few installation parameters.		E	Select Local Package Directory Select a directory where you want Setup to store the installation files it downloads. The directory will be created if it does not already exist.		Þ
Root Directory			Local Package Directory		
C:\cygwin64	Brows	se	C:\Users\dssdi\Downloads	Br	owse
Just Me Cygwin will still be available to all users, but Desktop Icons, Cygwin Menu Entries, a Installer information are only available to the current user. Only select this if you lac Administrate retrivilence or function and the provided of the second.	and impo	ortant			
Manimistrator privileges of in you have specific freeds.					

1) Click on **Next** to proceed with the default installation location

E Cygwin Setup - Select Connection Type E Cygwin Setup - Choose Download Site(s) \times × Select Your Internet Connection Choose A Download Site Choose a site from this list, or add your own sites to the list Setup needs to know how you want it to connect to the internet. Choose the appropriate settings below. Available Download Sites: http://mirrors.163.com Use System Proxy Settings https://mirrors.163.com https://mirrors.aliyun.com https://mirror.clientvps.com Direct Connection http://cygwin.mirror.constant.com Use HTTP/FTP Proxy: http://cygwin.mirrors.hoobly.com https://mirrors.huaweicloud.com http://mirror.team-cymru.com Proxy Host ftp://mirrors.xmission.com http://mirrors.xmission.com Port 80 https://mirrors.xmission.com http://mirror.clarkson.edu https://mirror.clarkson.edu Las. / A. althe searcher and User URL: Add Next > Next > Cancel < Back Cancel < Back

2) Select one of the download sites, click on **Next** to initiate Cygwin download

Adding complementary packages

Under View, use the dropdown menu and choose Not Installed

Cygwin Setup - Select Packages Select Packages Select packages to install			x	E Cygwin Setup - Select Packages Select Packages Select packages to install			6
View Category V Search	Clear	🔿 Keep 🛛 💿 Best	◯ Sync □ Test	View Not Installed View Search	Clear	🔿 Keep 🛛 🗿 Best	⊖ Sync □ Test
Package	Current	New	Src? Ca	Package	Current	New	Src?
⊞ All		Default	•	2048-cli		Skip	•
				2048-cli-debuginfo		Skip	▼
				2048-qt		Skip	▼
				2048-qt-debuginfo		Skip	▼
				4ti2-debuginfo		Skip	▼
				AtomicParsley		Skip	▼
				AtomicParsley-debuginfo		Skip	▼
				CUnit		Skip	▼
				CUnit-debuginfo		Skip	
Hide obsolete packages		< Back	Next > Cancel	Hide obsolete packages		< Back	Next > Cance

Adding complementary packages – WGET

1) Type wget in the Search bar

2) Click on the skip next to **wget** and choose the latest version (**1.21.2-1**)

Select Packages Select packages to install Select Packages Select packages to install Select Packages Select packages to install View Not Installed Search wget Co Keep Best Sync Test Package Current New Src? Ce Ibwget2_devel Skip De Ibwget2_1 Skip De De Ibwget2_1 Skip Per Skip New wget debuginfo Skip Per Skip New wget2 Skip We Skip wget2debuginfo Skip Skip Skip	- 0
View Not Installed Search wget Clear Ko Package Current New Src? Ca libwget2/devel Skip Ibwget2/devel Skip Skip pwget Skip Ibwget2/devel Skip Skip wget Skip Package Curent New wget Skip Package Skip wget debuginfo Skip Package Skip wget2 Skip Wee Skip wget2/debuginfo Skip Skip Skip wget3/debuginfo Skip	E
Package Current New Src2 Ca libwget2_devel Skip Ibwget2_devel Skip Ibwget2_devel Skip jwget Skip Ibwget2_devel Skip Ibwget2_l Skip jwget Skip Per Net Met Skip wget_debuginfo Skip Ibe Skip Skip wget2 Skip Ibe Wet Skip wget2/debuginfo Skip Ibe Skip Skip wget2/debuginfo Skip Ibe Skip Skip wget2/debuginfo Skip Ibe Ibe Skip wget2/debuginfo Skip Ibe Ibe Ibe wget3/debuginfo Ibe Ibe Ibe Ibe wget3/debuginfo Ibe	ep 🗿 Best 🔿 Sync 🗌 Test
libwget2-devel Skip Ibwget2-devel Skip libwget2_1 Skip Ibwget2-devel Skip pwget Skip Per Per wget Skip Ibwget2-devel Skip wget-debuginfo Skip Del Wget Skip wget2-debuginfo Skip Ver Del Wget2 Skip wget2-debuginfo Skip Del Skip Skip Skip wget2-debuginfo Skip Skip Skip Skip Skip wget2-debuginfo Skip Skip Skip Skip Skip wget2-debuginfo Skip Skip Skip Skip Skip wget3-debuginfo Skip Skip Skip Skip	Src? Categories
libwget2_1 Skip Ibwget2_1 Skip pwget Skip Per wget Skip Net wget2 Skip Del wget2debuginfo Skip Del skip Del Skip wget2debuginfo Skip Skip wget3debuginfo Skip Skip <	 Devel, Libs, Web
pwget Skip Per Per wget Skip Net wget debuginfo Skip Del wget2 Skip We wget2/debuginfo Skip Del wget2/debuginfo Skip Del wget2/debuginfo Skip Skip wget2/debuginfo Skip Del wget2/debuginfo Skip Skip wget2/debuginfo Skip Del wget2/debuginfo Skip Skip wget3/debuginfo Skip Skip wget4/debuginfo Skip Skip wget5/debuginfo Skip Skip wget7/debuginfo Skip Skip wget7/debuginfo Skip Skip </td <td>✓ Libs, Web</td>	✓ Libs, Web
wget Skip Net wget debuginfo Skip Del wget2 Skip We wget2.debuginfo Skip Del wget2.debuginfo Skip Del wget2.debuginfo Skip Skip	 Perl, Utils
wget-debuginfo Skip Image: Del wget-debuginfo wget-debuginfo Skip wget-debuginfo Skip Skip wget-debuginfo Skip Skip wget-debuginfo Skip Skip Skip wget-debuginfo Skip Skip Skip Skip wget-debuginfo Skip Skip	Not Web
wget2 Skip We wget2 wget2 skip wget2-debuginfo Skip Del Del wget2-debuginfo Skip	Uninstall
wget2-debuginfo Skip Del wget2-debuginfo Skip	🗅 🗸 Skip
	1.21-1
	1.21.1-1
	1212-1
V Hide obsolete packages	
< Back Next > Cancel	< Back Next > Cancel

Adding complementary packages – CURL

1) Type **curl** in the *Search* bar

2) Click on the skip next to **curl** and choose the latest version (**7.79.1-1**)

ew Not Installed Search curl	Clear		🔿 Кеер	🗿 Best	⊖ Sync □ Test
Package	current	New		Sro	? Categories
surl 🚽 🚽 🚽		Skip		-	Net
curl-debuginfo		Skip		-	Debug
jambas3-gb-net-curl		Skip		•	Devel, Libs
bcurl-devel		Skip		-	Devel, Libs, Net
bcurl-doc		Skip		-	Devel, Doc, Net
ningw64-i686-curl		Skip		-	Devel, Net
ningw64-i686-curl-debuginfo		Skip		-	Debug
ningw64-x86_64-curl		Skip		-	Devel, Net
ningw64-x86 64-curl-debuginfo		Skip		- I	Debug

w Not Installed V Search curl	Clear		🔾 Кеер	🗿 Best	⊖ Sync	C Test
ackage	Current	New		Src	? Categorie	s
url		Skip		_	Net	
url-debuginfo		Skip		-	Uninstall	
ambas3-gb-net-curl		Skip		• ~	Skip	
curl-devel		Skip		•	7770-1	
curl-doc		Skip		•	7.77.0-1	
ngw64-i686-curl		Skip		•	7.78.0-1	
ingw64-i686-curl-debuginfo		Skip		_	7.79.1-1	
ingw64-x86_64-curl		Skip		- I L	Devel, ive	t
ngw64-x86 64-curl-debuginfo		Skip		-	Debug	

Adding complementary packages – BC

1) Type **bc** in the *Search* bar

2) Click on the skip next to **bc** and choose the latest version (**1.06.95-2**)

w Not Installed Search bc	Clear		🔾 Keep 🛛 🗿 Best	🔾 Sync 🗌 Tes
ackage	Current	New	Sr	c? Categories
e 🔶		Skip	▼ [Math
z-debuginfo		Skip	- I	Debug
crypt		Skip	▼ [Security
ambas3-gb-db-odbc		Skip	- □	Devel, Libs
dbcadm-gtk		Skip	- □	Database
dbctest		Skip	▼ [Database
Qt5WebChannel-devel		Skip	- □	Libs
Qt5WebChannel5		Skip	▼	Libs
aghbci22		Skip	▼ [Libs

w Not Installed V Search bc	Clear		() Кеер	Best	⊖ Sync	Test
Package	Current	New		Src	? Categories	;
bc		Skip		7	Moth	
oc-debuginfo		Skip			Uninstall	
pcrypt		Skip		~	Skip	
gambas3-gb-db-odbc		Skip			1.06.95-1	
odbcadm-gtk		Skip		I	1.00.00-1	
iodbctest		Skip			1.06.95-2	
libQt5WebChannel-devel		Skip		-	Libs	
libQt5WebChannel5		Skip		-	Libs	
libaqhbci22		Skip		-	Libs	

Adding complementary packages – GDAL

1) Type **gdal** in the *Search* bar

2) Click on the skip next to **gdal** and choose the latest version (**3.3.0-1**)

🗲 Cygwin Setup - Select Packages				- 🗆 🗙	E Cygwin Setup - Select Packages			- 0 ×
Select Packages Select packages to install				E	Select Packages Select packages to install			E
View Not Installed Search gdal	lear		🔿 Keep 🛛 🗿 Bes	t 🔿 Sync 🗌 Test	View Not Installed V Search gdal	Clear		🔿 Keep 💿 Best 🔿 Sync 🗌 Test
Package	Current	New	5	Grc? Categories	Package	Current	New	Src? Categories
gdal 🚽		Skip	•	Science	gdal		Skip	Science
gdal-debuginfo		Skip	•	Debug	gdal-debuginfo		Skip	Uninstall
libgdal-devel		Skip	•	Devel, Libs, Scien	libgdal-devel		Skip	 Skip
libgdal20		Skip	•	Libs, Science	libgdal20		Skip	231-1
libgdal26		Skip	•	Libs, Science	libgdal26		Skip	× 220.1
libgdal28		Skip	•	Libs, Science	libgdal28		Skip	2.3.2-1
perl-gdal		Skip	•	Perl, Science	perl-gdal		Skip	2.4.0-1
python-gdal		Skip	•	Python, Science	python-gdal		Skip	3.0.2-1
								3.0.2-2
								3.0.4-1
								3.2.1-2
								3.3.0-1
Hide obsolete packages					Hide obsolete packages			
			< Back	Next > Cancel				< Back Next > Cancel

Adding complementary packages – UNZIP

1) Type **unzip** in the *Search* bar

2) Click on the skip next to **unzip** and choose the latest version (**6.0-17**)

Cygwin Setup - Select Packages				- 0	\times	E Cygwin Setup - Select Packages					_	
Select Packages Select packages to install				(Select Packages Select packages to install						E
View Not Installed Search unzip	ear		🔿 Keep 🛛 💿 Best	⊖ Sync □ Tes	st	View Not Installed V Search unzip	Clear		() Кеер	O Best	⊖ Sync	Test
Package	Current	New	Src	? Categories		Package	Current	New		Src?	Categories	
unzip-debuginfo		Skip Skip	• •	Archive Debug		unzip-debuginfo		Skip Skip		•	Uninstall Skip 6.0-15 6.0-16 6.0-17	
✓ Hide obsolete packages						✓ Hide obsolete packages						
			< Back	Next > Cano	cel				< Bac	k N	lext >	Cancel

Adding complementary packages – ImageMagick

1) Type ImageMagick in the Search bar

2) Click on the skip next to **ImageMagick** and choose the version (6.9.10.11-4)

v Not Installed V Search ImageMagic	k Gar		ОКеер	O Best	⊖ Sync	Tes
ackage	Current	New		S	rc? Categories	
ageMagick		Skip		-	Graphics	
ageMagick-debuginfo		Skip		- [Debug	
ageMagick-doc		Skip		-	Graphics	
	_					

w Not Installed V Search ImageMagick	Clear		() Кеер	O Best	◯ Sync	Test
ackage	Current	New		Src	? Categories	
nageMagick		Skip		_	Graphics	
nageMagick-debuginfo		Skip		•	Uninstall	
nageMagick-doc		Skip		• •	Skip	
					6.9.5.7-1	
					6957-2	
					600111	
					0.9.9.11-1	
					6.9.9.11-3	
					6.9.10.11-1	
					6.9.10.11-2	
					6.9.10.11-4	
					7.0.10.27-1	
					7040070	

1) Click on Next several times to finalize the Cygwin installation

ew Not Installed V Search gdal	Clear		🔾 Keep 🛛 🖸 E	Best	⊖ Sync ⊡ Test
Package	Current	New		Src?	Categories
gdal		3.3.0-1	-		Science
gdal-debuginfo		Skip	-		Debug
ibgdal-devel		Skip	-		Devel, Libs, Scien
ibgdal20		Skip	•		Libs, Science
ibgdal26		Skip	•		Libs, Science
ibgdal28		Skip	•		Libs, Science
perl-gdal		Skip	-		Perl, Science
python-gdal		Skip	-		Python, Science
	_				

2) Check the two boxes and click on Finish

Cygwin Setup - Installati	ion Status and Create Icons	-	
Tell setup if you want it to Cygwin environment.	to create a few icons for convenient acces	ss to the	
6	Create icon on Desktop		
	Add icon to Start Menu		
Installation Status Installation Complete			
Installation Status Installation Complete			
Installation Status Installation Complete			



3) If everything goes well, you should see the Cygwin shortcut icon on your desktop



Package installation check

Open your Cygwin/Linux terminal and use the **which** command to locate the prerequisite executable files:

1) Check the **wget** package which wget

2) Check the **curl** package which curl

Check the bc package
 which bc

4) Check the gdal package which gdal_rasterize

5) Check the **unzip** package which unzip

6) Check the ImageMagick package which convert

dssdi@DESKTOP-LBE5830 ~ \$ which wget /usr/bin/wget

dssdi@DESKTOP-LBE5830 ~ \$ which curl /usr/bin/curl

dssdi@DESKTOP-LBE5830 ~ \$ which bc /usr/bin/bc

dssdi@DESKTOP-LBE5830 ~ \$ which gdal_rasterize /usr/bin/gdal_rasterize

dssdi@DESKTOP-LBE5830 ~ \$ which unzip /usr/bin/unzip

dssdi@DESKTOP-LBE5830 ~ \$ which convert /usr/bin/convert Please contact the NOAA's team <u>before</u> <u>the workshop</u> if you don't get the same path.

OpenGrADS installation

1) Download OpenGrADS installation file from: <u>https://sourceforge.net/projects/opengrads/files/grads2/2.0.2.oga.2/Windows/grads-</u> <u>2.0.2.oga.2-win32_superpack.exe</u>

- 2) Double-click on the executable file grads-2.0.2.oga.2-win32_superpack.exe.
- 3) Select the language **English** to use during the installation. Click **Next**. Select **I agree** and click **Next** several times







4) Open the Cygwin window and type: grads -1

dssdi@DESKTOP-LBE5830 ~ \$ grads -1

