

0	Export data for SN	IAPHU unwrapping							
	Read SnaphuExport								
	Target folder:	e:\out\snaphu							
	Statistical-cost mode:	DEFO							
	Initial method:	MCF							
	Processing completed in 30 seconds								
	Process								
_									

SNAPHU Export

Unwrapping with SNAPHU

SNAPHU is a statistical-cost network-flow algorithm for phase unwrapping developed at Stanford University by Curtis Chen and Howard Zebker. http://nova.stanford.edu/sar_group/snaphu/

Snaphu is available for Linux only. Linux users simply need to install the software package by

apt-get install snaphu

Windows users can download a Linux VMWare virtual machine and use it to unwrap the phase.

http://sourceforge.net/projects/s1tbx/files/snaphu_vm/SAR%20Mint%2064.zip/download

The free VMWare Workstation Player can be downloaded from https://my.vmware.com/web/vmware/downloads

Open the VMware player and browse for the virtual machine.

Edit the virtual machine settings to increase the memory and setup a shared folder between Linux and Windows.

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Edit Virtual Machine Settings

Increase the memory to suit your computer. Depending on the size of your images, you may need at least 8GB.



Device	Summary	Memory
Memory Processors Hard Disk (SCSI) CD/DVD (IDE) Floppy Network Adapter USB Controller Sound Card Printer Display	2 10 GB Auto detect Auto detect NAT Present Auto detect Present Auto detect	and the internet of a method y and called to this without a mathine internet y and called to this without a mathine. Memory for this virtual machine: 4096 → MB 64 GB - 32 GB - 16 GB - 8 GB - 16 GB - 2 S596 MB 512 MB - 32 MB - 32 MB - 32 MB - 32 MB - 4 MB -
	Remove	

Increase Memory

Under the **options** tabs, add a shared folder. Select 'Always Enable'.



rdware options				
Settings	Summary	Folder sharing		
🗐 General Power	Mint 64	Shared fol virtual may your data	grams in the puter and Iders if you	
🔋 Shared Folders	Disabled	trust the virtual machine with your data.		,
WWware Tools	Time sync off	Disabled Always enabled Enabled until next power off or suspend Folders		
Autologin	Not supported			
		Name	Host Path	
		without	C:\VM\vmshare	
			Add Remove	Properties

Enable a Shared Folder

Save the wrapped phase output into the shared folder

After starting the Linux virtual machine, open a command terminal and you should see the data in */mnt/hgfs/*

Start the virtual machine and login with: Login: sar Password: sar01

Go to the data folder in /mnt/hgfs/ and open the **snaphu.conf** file.

cd /mnt/hgfs/vmshare/data/target_snaphu/ gedit snaphu.conf &



📃 snaphu.conf 🗶 # CONFIG FOR SNAPHU # Created by NEST software on: 11:16:49 20/03/2015 # # Command to call snaphu: # # snaphu -f snaphu.conf Phase ifg srd 07Aug2014 31Aug2014.snaphu.img 18453 # Unwrapping parameters # STATCOSTMODE DEFO MCF INITMETHOD TRUE VERBOSE

Copy the snaphu command and paste it into the command terminal and then run it.

snaphu -f snaphu.conf Phase_ifg_srd_07Aug2014_31Aug2014.snaphu.img 18453

SNAPHU uses an iterative optimization procedure; its execution time depends on the difficulty of the interferogram.

Unwrapping can use a lot of memory. If the unwrapping fails due to there being not enough memory, you could create a subset of your area of interest and try with SNAPHU again.

Terminal Building azimuth cost arrays Initializing flows with MCF algorithm Setting up data structures for cs2 MCF solver Running cs2 MCF solver Running nonlinear network flow optimizer Maximum flow on network: 12 Number of nodes in network: 32349493 Flow increment: 1 (Total improvements: 0) 1 incremental cost clipped to avoid overflow (0.000%) Treesize: 32349493 Pivots: 581827 Improvements: 12560 Maximum flow on network: 3 Flow increment: 2 (Total improvements: 12560) Treesize: 32349493 Pivots: 20 Impro Improvements: 0 Maximum flow on network: 3 Flow increment: 3 (Total improvements: 12560) Treesize: 32349493 Pivots: 0 Impro Pivots: 0 Improvements: 0 Maximum flow on network: 3 Total solution cost: 138196748 Integrating phase Writing output to file Unw Phase.img Program snaphu done 0:46:23.01 Elapsed processor time: Elapsed wall clock time: 0:46:51

SNAPHU Output