LOFAR DATA RETRIEVAL TUTORIAL I

Hanno Holties

NB The essentials of this tutorial (not "obtaining a LOFAR webservices account") can be found at <u>http://www.lofar.org/wiki/doku.php?id=public:lta_howto</u> Please look there for help in case you experience an issue outside of the LOFAR Data School. If further help is needed, contact <u>sciencesupport@astron.nl</u>

Prerequisites

I) Getting a LOFAR webservices account.

In most cases, a LOFAR webservices account is generated at the time of becoming involved in a LOFAR observing (or archive) project proposal. This account would be authorized for access to the LOFAR archive (LTA) as soon as the proposal is accepted and gets assigned LTA resources (i.e. storage capacity).

If you are already involved in a LOFAR or WSRT proposal or project, it will not be needed to generate a new account although it might still be necessary to arrange for LTA access authorization (next section).



1. Go to <u>https://lofar.astron.nl/proposal</u>

- Click on "Register as new user"
 Follow the instructions

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	Help		
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NB Once you receive the confirmation mail, it is for this tutorial not necessary to change the temporary password, as a new temporary password will be generated when LTA authorization is set. For the latter we currently have a separate authentication database with it's own password policy.

II) LTA Authorization

For the purpose of the LOFAR data school, we will bypass the normal route for obtaining LTA access authorization. Therefore:

- 1. Notify <u>sciencesupport@astron.nl</u> that you have created a LOFAR account and are requesting LTA access authorization providing motivation (e.g. that you are participating in the LOFAR Data School)
- 2. Wait for the mail notifying you that your account has been migrated to the LOFAR Identity Management system and a new password needs to be set
- 3. Follow the instructions in the mail

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Subject: ASTRON	Identity Management password change notification.	
Dear Dr Hanno H	olties,	
Your ASTRON web the ASTRON Ident generated:) applications account (holties) is from now on managed via ity Management system. A new initial password has been	
Jk76bNxX*		
Please use this pa Password Self Ser will be asked to c policy. You will als Password service. Once you have su	ssword to log in to the ASTRON Web Applications vice at https://web.portal.astron.n/pwm. You reate a new password that complies to the password to be asked to enter information for the Forgotten	
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4. Go to <u>http://lofar.target.rug.nl</u>



5. Click on "Login" and provide your credentials. Confirm that your credentials provide access to the LTA. If there is a problem, contact <u>sciencesupport@astron.nl</u>





III) Obtaining a personal Grid certificate (optional but recommended)

For users that expect to be retrieving large quantities (number of files and/or data volume) from the LTA, it is strongly recommended that the Grid client toolset is used. This toolset provides access to far more data throughput capacity and more robust services. For the data school, access will be provided to a system that has Grid client software installed. For help and instructions for a local installation (either personal or university/department computational facilities), look at the appropriate links on:

http://www.lofar.org/wiki/doku.php?id=public:lta_howto

- 1. Check if the institute at which you are employed provides facilities for obtaining a personal grid certificate
 - a. If it does, follow the local procedure and continue with step 4b. If not:
- 2. Go to <u>https://tcs-escience-portal.terena.org/</u> and try if you can obtain a certificate through this service





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- a. If you can, follow the instructions and continue with step 4
- b. If not:
- 3. Go to http://ca.dutchgrid.nl/start/ and follow the instructions



The webstart application requires JAVA to be installed and you may have to confirm one or more security exceptions. If it does not work from the browser and you do have JAVA installed, you will have to start the application from a commandline (with an active X connection to your terminal system):

> javaws http://ca.dutchgrid.nl/start/jgridstart.jnlp



4. Click on "request a new certificate" and fill in the required fields.



000	Request a new certificate – Generate request
Request a nev	v certificate
 Generate request Submit request Verification form Installation What's next 	Please identify yourself with name and organisation. Given name(s): Surname Username@institute.org address: Organisation Netherlands Institute for Radio Astronomy (Astron) : Galvanced) Your personal key is generated together with the request, and needs to remain private to you only. Your password should be at least 12 characters long, and include include non-alprics. Please choose your password carefully; it must not be easy to easy to guess, heed to remember it. Password: Password: Agree to the privacy policy of the DutchGrid CA
	Previous Next Cancel

NB If your home institute is not listed, choose "Netherlands Institute for Radio Astronomy (Astron)" for the association. This implies you have a work relation with ASTRON, and will authenticate yourself at an ASTRON based Registration Authority (see below) even if you are not an employee of ASTRON. It is not required to have/use an ASTRON mail account.

5. Click "Next" and "Display Form". Fill in remaining information and click "Save as PDF"

Request a new certificate Generate request Submit request Verification form Installation What's next	
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 Generate request Submit request Verification form Installation What's next Besides submitting your request for a certificate, you need to send a signed registration form to the Certification Authority by following these steps: Fill in and print the paper form display form (help) Obtain a signature from your Registration Authority (help) Send the signed form to the Certification Authority (help) Wait until the request is processed (help) 	

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- 6. Print form (or have it printed) and retrieve it. Fill in any required fields that are not yet completed (e.g. signature).
- 7. Present yourself with the form to a so-called Registration Authority. If you are visiting ASTRON (e.g. for the LOFAR data school), there are currently two RA's that can take care of the required formalities: Hanno Holties and John Romein. NB an official document with which you can be identified (e.g passport, drivers license) is required to be presented to the RA. For the data school, a separate occasion is included in the program where

your form can be authorized and processed through special 'express' handling to allow you to use your certificate by the time of the data retrieval tutorial.

Detailed instructions are provided as well at: http://wiki.nikhef.nl/grid/JGridstart/Help/Request_new_certificate

- 8. Wait for your certificate to be validated (you should receive a mail but can also check the status by refreshing the jGridStart screen)
- 9. Install the certificate by following the instructions provided by your certificate authority. Typically this involves:
 - a. Save the mail with the signed certificate as \$HOME/.globus/usercert.pem and make sure that the userkey.pem file in that directory contains the private key that matches this certificate.
 - b. As these *.pem files are strictly personal, their permissions should be set properly using the following command:
 > chmod 600 *.pem

Next you need to apply for membership of the LOFAR 'Virtual Organisation':

10. Load the certificate into your web browser. Installation can be done using the jGridstart tool (see above) for supported browsers. See e.g. <u>http://ca.dutchgrid.nl/info/browser</u> for further instructions.



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11. Apply for authorization to use LOFAR resources at

https://voms.grid.sara.nl:8443

(this will only work when the certificate has been installed properly in the browser you are using, NB it may be necessary to manually 'trust' the server certificate)



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- 12. You should receive a confirmation mail, typically within a working day. If not, contact sciencesupport@astron.nl
- 13. Copy (if you have not yet done so in step 5) the usercert.pem and userkey.pem files to the \$HOME/.globus directory of the system where you will be running the grid client software and make sure permissions for the userkey.pem files are restricted to owner access only. E.g.: cd \$HOME/.globus; scp user*.pem <account>@<targetsystem>:.globus/; ssh 'chmod 600 .globus/*.pem'

Your certificate is now set up so that you can use the Grid client toolset.

NB These certificates will need to be refreshed once a year. Reminder mails are sent with ample time to take action. If you fail to do so in time, you would need to go through the above process again to obtain a new certificate.