

# How to Request Host Certificate

호스트 인증서 신청 방법

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http://ca.gridcenter.or.kr/

Visit ca.gridcenter.or.kr



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## KISTI Grid Certificate Authority

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### Introduction

Welcome to KISTI Grid Certificate Authority web site.

KISTI Grid Certificate Authority is operated by the Grid Technology Research Team of KISTI (Korea Institute of Science and Technology Information).

The authority satisfies requirements from APGrid PMA.

Certificate issues by the KISTI Grid CA are compatible with the Globus Toolkit middleware.

The public key cryptography is the basis of grid security architecture.

Certificate Authority(CA) is a mandatory component of public key infrastructure(PKI).

Please read "[Overview of the Grid Security Infrastructure](#)" from Globus site.

Best viewed with [Firefox browser](#).

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Fill out the subscription form.

2. Interview with a RA with the application form. ([RA contact information](#))

Provide the following information when interview with a RA:

- o the application form
- o proof of identity (work ID card, passport, national ID card, etc.)

3. Keep the PIN number of the application form securely.

The RA should fill the PIN number field in the form.

Fax the form to the number specified in the form.

4. Please send an notification e-mail to [ca@gridcenter.or.kr](mailto:ca@gridcenter.or.kr) after sending a FAX.

5. KISTI Grid CA staff will respond immediately when we receive your request form.

6. KISTI Grid CA will send an Web Access Client Certificate(WACC) to your e-mail, if everything is okay.

Install this certificate in your web browser to access to the on-line certificate request service web site.

Your PIN number is the password for your WACC.

Follow [this instruction](#) to install the web access certificate(WACC) in your browser.

## Step 2. Request a Grid Certificate from KISTI GRID CA

- If you are applying for a **user certificate**,

Click [User Certificate Request](#)

- If you are applying for a **host/service certificate**,

Click [Host/Service Certificate Request](#)

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## **Instruction for requesting an Host or Service Certificate**

By requesting a certificate, you indicate that you accept the [Certificate Policy and Certificate Practice Statement](#) and that you agree to the [Subscriber Obligation](#) specified in the document.

## Step 1. Enroll KISTI CA

Before requesting user certificate from KISTI GRID CA, you are required to enroll KISTI GRID CA.

## **Step 2. On-line Certificate Request**

[Click here to request service or host certificate in the Online Request Service.](#)

If you don't have a WACC in your browser, the access to the web page is not permitted.

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Connect to “Online Request Service” using your WACC certificate.



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# KISTI Grid Certificate Authority

## Request Host Certificate

**Step 1.** Generate a CSR for your host.

**Step 2.** Upload the CSR using the following form.

Country:	KR
Organization:	KISTI
Organization:	GRID
Organization:	<input type="text"/>
Host FQDN:	<input type="text"/> (max. 30 characters) e.g. hostname.example.co.kr

Copy and paste your CSR block below:

CSR:

This CSR input textarea.

Upload CSR

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## How to generate CSR with **OpenSSL**

```
openssl req -new -sha1 -newkey rsa:1024 -nodes -keyout hostkey.pem -out hostcert_request.pem -subj "/C=KR/0=KISTI/0=GRID/0=ORGANIZATION/CN=host/grid.example.com"
```

Using RSA 1024-bit and  
do not encrypt the key using DES.

This is common for every certificate issued by KISTI CA

Replace this your own organization and hostname.

If you use globus software, for host certificate 'host/' is prefixed in the CN.

If successful, the hostkey.pem and hostcert\_request.pem files are generated.

## How to generate CSR with **OpenSSL**

EX) a user in KISTI request a host certificate with the name 'test.kisti.re.kr'

Run like this,

```
openssl req -new -sha1 -newkey rsa:1024 -nodes -keyout hostkey.pem -out hostcert_request.pem -subj "/C=KR/0=KISTI/0=GRID/0=KISTI/CN=host/test.kisti.re.kr"
```

Check the generated CSR.

```
openssl req -in hostcert_request.pem -text -noout
```

```
Certificate Request:  
Data:  
    Version: 0 (0x0)  
    Subject: C=KR, O=KISTI, O=GRID, O=KISTI, CN=host/test.kisti.re.kr  
    Subject Public Key Info:  
        Public Key Algorithm: rsaEncryption  
        RSA Public Key: (1024 bit)  
            Modulus (1024 bit):  
                00:c0:c0:8a:0d:90:3d:f2:df:d1:a3:2d:0e:79:cf:  
                27:10:1e:9c:ab:6c:e6:cb:d7:55:3e:9d:2e:a0:88:  
                73:6a:e9:76:cc:03:6c:a1:22:67:da:30:12:3d:98:  
                9a:20:7e:8a:ae:68:f6:25:ab:60:7d:99:4f:4a:d8:  
                d2:c4:77:70:d0:9a:5b:aa:7b:6b:2b:a2:48:74:54:  
                b4:a3:a1:fc:b6:3d:0a:df:95:4b:ae:e8:80:0a:8f:  
                9d:76:f5:91:83:21:0b:10:1d:b9:27:5c:af:63:81:  
                b0:fe:3a:f4:f1:8f:1d:3a:07:34:cf:42:08:4b:52:  
                03:41:2d:51:d0:1e:2c:36:cb  
            Exponent: 65537 (0x10001)  
    Attributes:  
        a0:00  
Signature Algorithm: sha1WithRSAEncryption  
    b0:bd:15:d6:69:6d:36:72:ce:55:41:dd:21:da:dc:03:8b:2e:  
    d3:21:82:11:e5:e2:3c:04:2e:47:57:bF:3F:cb:75:e3:6d:8F:  
    c4:98:fd:3a:79:ac:62:f9:cc:23:a0:f8:a4:35:51:eb:c3:10:  
    93:a3:65:06:69:cc:1a:ed:ce:ea:4a:17:58:ee:b7:cc:93:5b:  
    be:6c:7b:d5:2d:d0:43:9a:a3:45:c8:30:07:b1:90:2e:f8:6d:  
    5F:c2:5b:83:e0:d7:c4:e8:6c:74:dF:64:cd:41:d5:4F:09:e3:  
    21:e6:d3:53:bf:62:77:3c:30:cf:0c:1b:03:ad:c2:9c:c9:55:  
    cc:a6
```

Check the subject of the CSR

Check the RSA key size.

If the CSR have no problem,  
You can input the CSR text block in the previous step.

Copy the content of the hostcert\_request.pem file.

```
5f:c2:5b:83:e0:d7:c4:e8:6c:74:df:64:cd:41:d5:4f:09:e3:  
21:e6:d3:53:bf:62:77:3c:30:cf:0c:1b:03:ad:c2:9c:c9:55:  
cc:a6  
[sangwan@gridnew ~]${ more hostcert_request.pem  
-----BEGIN CERTIFICATE REQUEST-----  
MIIBnDCCAQCAQAwXDELMAkGA1UEBhMCS1IxDjAMBgNUBAoTBUTJU1RJM08wCwYD  
UQQKEwRHUK1EMQ4wDAYDVQQKEwULSUNUSTeMBwGA1UEAxMUaG9zdC90ZXN0Lmtp  
c3RpLnJlLmtyMIGFMA0GCSqGSIb3DQEBAQUAA4GNADCBiQKBgQDAwIoNkD3y39Gj  
LQ55zycQHpyrb0bL11U+nS6giHNq6XbMA2yhImFaMBI9mJogFoquaPYlq2B9mU9K  
2NLEd3DQmluqe2srokhs0ULSjofy2PQrf1Uuu6IAKj5129ZGDIQsQHbknXK9jgbD+  
0vTxjx06BzTPQghLUgNBLVHQHiw2ywIDAQABoAAwDQYJKo2IhvcNAQEFBQADgYE  
sL0U1mltNnLOVUHdIdrcA4su0yGCEeXiPAQuR1e/P8t1422PxJj90nmsYvnMI6D4  
pDUR68MQk6N1BmnMGu306koXW063zJNbvmx71S3QQ5qjRcgwB7GQLvhtX8Jbg+DX  
x0hsdN9kzUHUTwnjIebTU79idzwwzzwbA63CnM1UzKY=  
-----END CERTIFICATE REQUEST-----  
[sangwan@gridnew ~]${
```

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# KISTI Grid Certificate Authority

## Request Host Certificate

**Step 1.** Generate a CSR for your host.

**Step 2.** Upload the CSR using the following form.

Country:	KR
Organization:	KISTI
Organization:	GRID
Organization:	KISTI
Host FQDN:	test.kisti.re.kr (max. 30 characters) e.g) hostname.example.co.kr

Select Organization and input the Host FQDN.

Copy and paste your CSR block below:

```
-----BEGIN CERTIFICATE REQUEST-----  
MIIBnDCCAUQUAQAwXDELMAkGA1UEBhMCS1IxJAMBgNVBAoTB  
UtJU1RJM0wCwYD  
VQQKEwRHUlEMQ4wDAYDVQQKEwVLSVNUSTEeMBwGA1UEAxM  
CSR:  
< Paste the copied CSR text block. >
```

Finally, press the Upload button.

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## KISTI Grid Certificate Authority

- Home  
- Request Certificate  
- My CSR List  
- KISTI CA Home

Your CSR has been requestd to KISTI CA.

KISTI CA will review your CSR, before issuing your certificate.

Your CSR is sent to your email **sangwan@kisti.re.kr**.

After KISTI CA issue your certificate, a notification e-mail will be sent to you.

CSR information has been stored and the page show that an email message has been sent.

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# KISTI Grid Certificate Authority

**My Certificate Signing Request List**

ID	Type	Form Information	Date	Status	View
1	user	O=KISTI CN=80864141 Sangwan Kim	2007-07-21 15:44:39	issued	[show] / [hide]
14	host	O=KISTI CN=test.kisti.re.kr	2007-10-02 11:25:03	upload	[show] / [hide]

Request CSR information is shown in the left size menu  
' My CSR List'

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After finishing CSR upload process,  
for notification, please send an email to [ca@gridcenter.or.kr](mailto:ca@gridcenter.or.kr)  
containing the following message.

To KISTI CA manager ,

I have uploaded my host certificate request ,  
please sign the CSR .

FROM: Your Name