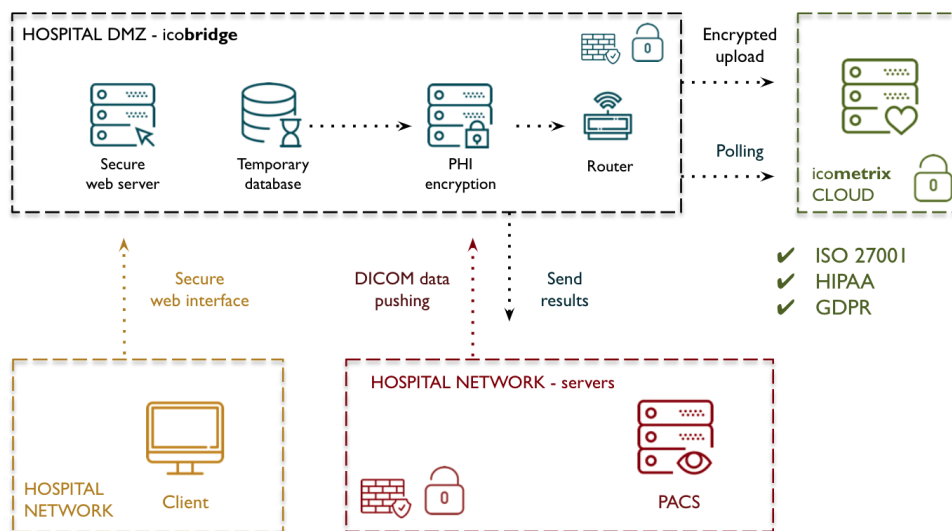


icobridge 4.x: Windows Installation Manual

In case of issues, please contact icometrix at support@icomatrix.com or +32 16 369 000

Step 1: Server specifications

- Operating System: Windows (preferably Windows 2016 or later version)
- CPU: at least 2 cores, 4 if a lot of data throughput is expected
- RAM: 4GB
- Disk space: 20 GB required for software, 100 GB for operating system
- WAN traffic: outgoing port 443
- LAN traffic: PACS communication can be chosen in the config file, see below.
- Server should be located in a secure environment, as it will temporary store patient data.
- Data flow diagram:



Step 2: Firewall requirements

- Allow outgoing connection from icobridge server to regional icobrain servers (only add applicable region):

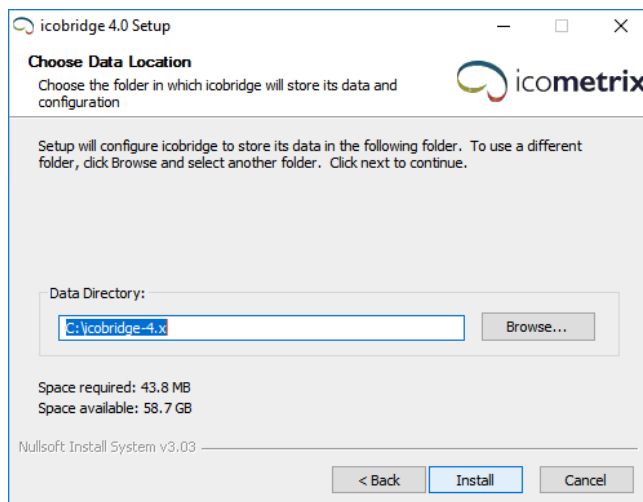
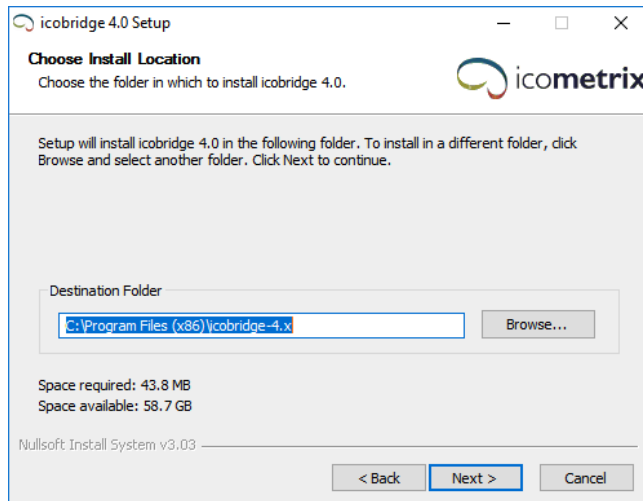
Region	Hostname	Ip addresses	Protocol	Port
Europe	icobrain-eu.icometrix.com	13.248.146.126 76.223.24.191	https	443
USA	icobrain-us.icometrix.com	99.83.128.166 75.2.48.119	https	443
Australia	icobrain-au.icometrix.com	99.83.178.138 75.2.66.88	https	443

Step 3: Install software

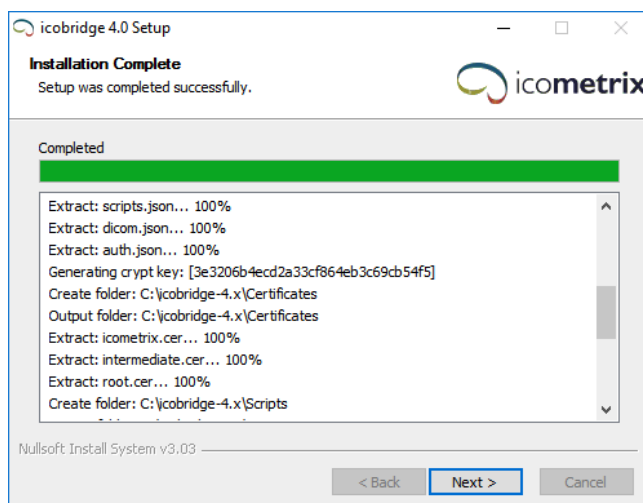
- Run icobridge-installer-4.x.exe
- Example installation process can be seen below



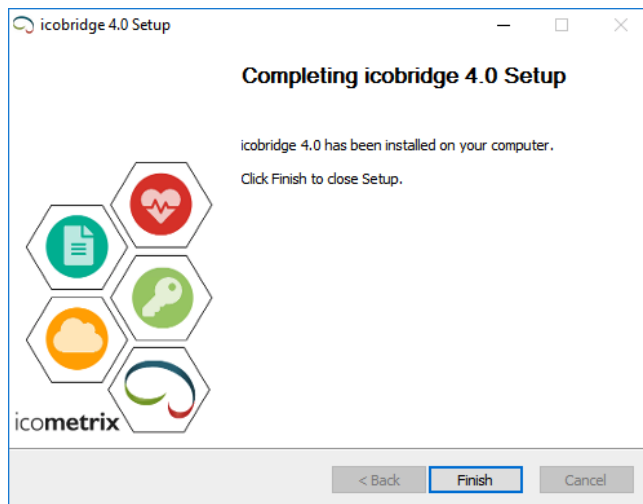
- DICOM server and executables will be installed in C:\Program Files (x86)\icobridge-4.x
- Configuration files, database and log files are stored in C:\icobridge-4.x



- During installation a random unique encryption key is generated to pseudonymise data before upload, it is recommended that you change this afterwards during the configuration step.



- When the installation is finished, the **icobridge** service is started and you are redirected to <http://localhost:8042/icobridge/core> where you can register the **icobridge**.



Step 4: Registration

- Url: <http://localhost:8042>
- A valid cloud authentication configuration is required
- If none is available, you are prompted to register the **icobridge**:

 **New icobridge registration**

Country * ▼

Data location * ▼

Hospital *

Technical contact email

☐ I agree with the [terms and conditions](#)

Register

- Fill in the form values:
 - Country: select country from list
 - Region: is automatically chosen based on regulatory rules for each country
 - Hospital: hospital name, please specify as detailed as possible

- Technical contact: this is the email address of the person we can contact should we notice issues with the **icobridge**. Make sure this is a technical person, preferably IT personnel, that can assist with questions regarding network, PACS, firewall, virtual machine, etc
- Agree with the terms and conditions, which can be read by clicking the link.
- Click register, the **icobridge** is restarted in the background with new configuration values. The web page is automatically reloaded.
 - Should there be a problem with the registration, first refer to the log files in C: \icobridge-4.x\Logs\ to determine possible cause.
 - If issues persists, please contact icometrix at support@icometrix.com or +32 16 369 000
- If registration was successful, you are redirected to the configuration page.

Step 5: Configuration

- Url: <http://localhost:8042>
- Use navigation on the top to update current configuration values. Click save configuration button to apply changes and reset **icobridge**.
- Only fill in forms for services that are required, some are optional (SMTP, LDAP, HL7, etc)
- In order to test **icobridge** installation, DICOM and PACS configuration are required.
- Note that the configuration interface is only available from the local machine (localhost).

Step 6: DICOM configuration

- DICOM server allows to receive images from other PACS servers, modalities or DICOM nodes
 - Port: DICOM server listening port, can be chosen. Add incoming firewall connection exception if needed.
 - AE title: identifier, this is used to communicate back to PACS server, by default we use ICOBRAIN_MS. On receiving DICOM images no AE title check is performed.

IP address or hostname

This would be the IP address of this machine (localhost)

Port

9104

Called AE title

Please add DICOM nodes for every ICOBRAIN_XX product

Calling AE title

ICOBRAIN_MS

- PACS Server or DICOM node able to receive DICOM results
 - IP address: ip address (or hostname)
 - Port: typically 104 is used
 - AE title: PACS server identifier, note that is value could be case sensitive

IP address or hostname

pacs.ip.address

Port

104

Called AE title

PACS

Calling AE title

ICOBRAIN_MS

- A PACS C-Echo test can be performed, note that you first need to save any configuration changes made.

Step 7: PACS configuration

- Add incoming DICOM route:
 - ip-address/hostname: ip-address or hostname of the machine hosting the **icobridge** software
 - AE title: ICOMETRIX
- Add outgoing DICOM routes:
 - ip-address or hostname of the machine hosting the **icobridge** software
 - port: 9104, unless changed in step 6
 - AE titles: ICOBRAIN_MS, ICOBRAIN_DM, ICOBRAIN_TBI, ICOBRAIN_EP and ICOBRAIN_CVA

Step 8: Testing

- Send image from PACS to at least one of the three routes added in step 7
- Verify data is uploaded to icometrix by checking the log files in **C:\icobridge-4.x\Logs** or from the interface <http://localhost:8042>
- Verify report and result overlays are received in PACS and correctly shown

Notes

- Virus scanner

- Exclude directory **C:\icobridge-4.x\OrthancStorage** and with extension **C:\icobridge-4.x** from read and write access scan.
- Having a virusscan enabled on that directory can impact performance and cause database corruption
- Directory permissions
 - Make sure system and service users have write permissions to **C:\icobridge-4.x** directories
 - During auto-update new files in those directories are downloaded or changed
- Encryption key
 - A random unique key was generated during installation, but we recommend you to change it afterwards.
 - Any character is allowed, use at least 8 characters, keep in mind the encryption key should have enough randomness.

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