

Configuring the Gateway as a DICOM Router

Configuring the OnePacs Gateway to route to multiple destinations based on rules

In certain situations it may be desirable to be able to forward cases from the gateway to multiple destinations based on rules. By default, the OnePacs Gateway only forwards studies to the OnePacs server. This is the recommended configuration. If your goal is to store a copy of studies to an SCP via DICOM and you have the ability to install the study retriever it may be simpler to create a user with a user access filter or give the user access to a shared folder to control what studies will be accessible and then setup the study retriever with that user configured on the local network of the SCP. The study retriever can then be setup to store to a destination using the destinations tab. If everything (Gateway, study retriever, additional SCP) is on the local network then the "Local gateway settings" should be enabled on the [OnePacs Study Retriever](#)

It is also possible to configure a gateway to forward studies to more than just the OnePacs server. This configuration can be performed by technically advanced users, or may be performed by the OnePacs support staff. For users with the requisite technical skill to perform this configuration, instructions follow.

Advanced configuration to support multiple forwards

It is possible to modify the gateway installation to support forwards to multiple destinations. Follow the steps below to add an additional forward destination AE title to your OnePacs Gateway deployment:

- First, [install the OnePacs Gateway](#) and reboot.
- Log in to the OnePacs Gateway [administrative interface](#).
- On the AE Management tab, create a new AE title definition for the additional forward destination. At a minimum you will need to enter the AE Title, HostName, and Port of your destination. You may press the echo button to ensure that the device is properly setup.
- Press the create button.

AE Title	<input type="text" value="DESTINATION_AE1"/>
Hostname	<input type="text" value="hostname"/> <input type="checkbox"/> check
Port	<input type="text" value="104"/>
Cipher Suites	<input type="text" value="-"/> <input type="button" value="v"/> <input type="text" value="-"/> <input type="button" value="v"/> <input type="text" value="-"/> <input type="button" value="v"/>
Issuer	<input type="text"/>
User ID	<input type="text"/>
Password	<input type="text"/>
FS Group ID	<input type="text"/>
Description	<input type="text"/>
	<input type="button" value="Echo"/> <input type="button" value="Create"/> <input type="button" value="Cancel"/>

- Second, [Log into JMX console](#)

- [service=DeviceService](#)
- [service=DicomSecurity](#)
- [service=ECHOService](#)
- [service=ExportManager](#)
- [service=FileCopy](#)
- [service=FixPatientAttributesService](#)
- [service=Forward](#)
- [service=Forward2](#)
- [service=GPWLFeed](#)
- [service=GPWLScp](#)
- [service=GPWLScu](#)
- [service=HL7Send](#)

If you want to add a simple forward for all studies

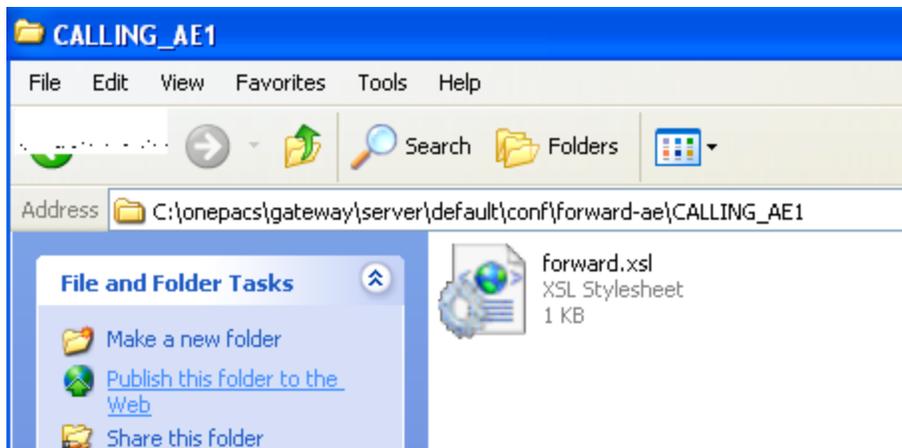
Select the service=Forward To add a simple forward for all studies add the new destination AE Title as part of a comma separated list in the Forwarding Rules configuration.

ForwardingRules	java.lang.String	RW	<pre> ONEPACS_WEB DESTINATION_AE1 </pre>	<p>List of forwarding rules, dependent upon which application - identified by the Calling AE title - sent the objects. The comma separated list of AE titles after the (optional) condition defines the forwarding destination (the other Storage SCP) by its Called AE Title. Each AE title can be suffixed by !- to defer forwarding to that destination outside a particular time interval.</p> <p>Format: [calling[!]=aeTitleFrom]aeTitleTo[from-to NONE where aeTitleFrom = the calling AE titles separated by ' ' (pipe) aeTitleTo = the AE titles that objects are forwarded to, in a comma-separated list from-to = start and end hour (0-23) when no forwarding should be performed for the aeTitleTo (Storage SCP) value (optional) NONE = do not use any forwarding rules.</p> <p>Example: [calling=SCU1 SCU2]SCP3,SCP4 8-16 Forwards objects received from AE Title SCU1 or SCU2 to Storage SCPs, SCP3 and SCP4. Forwarding of objects received between 8am and 4pm to SCP4 is delayed until 4 pm.</p>
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Add a more complex forward rule using the forward2 service

If you need more power to determine how studies are forwarded you could also configure the service=Forward2 which uses XSL to forward studies based on DICOM attributes

- Create a new folder dcm4chee-ae in the C:/onepacs/gateway/server/default/conf/ directory. Go into that directory.
- Create a new folder and name it the same name as your calling AE Title that will be sending the DICOM to the gateway.
- Go into that folder and create a file called forward.xsl. This file will control what is forwarded to where when studies are sent from the matching calling AE Title.



Edit the file to forward the to the correct destination AE title. There are several example forward.xsl files that already exist in your installation under the C:/onepacs/gateway/server/default/conf/dcm4chee-ae/MOD_AET directory and may be used as examples. Below is an example of a forward that will forward everything from a device with the calling AE title of CALLING_AE1 to DESTINATION_AE1 and will only forward studies that have DICOM institution name (0008,0080) of INSTITUTION_NAME to AE title DESTINATION_AE2. (Both destinations would have been added before when adding the AE titles)

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<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet xmlns:xsl="http://www.w3.org/1999/XSL/Transform" version="1.0">
  <xsl:output method="xml"/>

  <xsl:variable name="lowercase">abcdefghijklmnopqrstuvwxy</xsl:variable>
  <xsl:variable name="uppercase">ABCDEFGHIJKLMNPOQRSTUVWXYZ</xsl:variable>

  <xsl:template match="/dataset">
    <destinations>
      <!-- Forward all Series to DESTINATION_AE1 -->
      <destination aet="DESTINATION_AE1"/>
      <!-- Forward all series with DICOM institution name of INSTITUTION_NAME to DESTINATION_AE_2 -->
      <xsl:if test="translate(attr[@tag='00080080'],$lowercase,$uppercase)='INSTITUTION_NAME'">
        <destination aet="DESTINATION_AE2"/>
      </xsl:if>
    </destinations>
  </xsl:template>
</xsl:stylesheet>
```