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Installing Argus on a Macintosh

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1 Introduction

This guide will be rendered redundant with the release of Argus version 4.1, because that new version will be the first to use a proper installer for Macs. This means that many of the complex tasks detailed below, such as setting up Cron Tabs and copying files will be handled automatically by the installer.

1.1 About this Guide

This is a detailed guide that describes how to install Argus on a Macintosh computer.

This guide presupposes a high-level understanding of Argus, as detailed in **Guide A – The main features of Argus**. A basic understanding of the Mac OSX software is also required.

1.2 Terms and Abbreviations

Term	Definition
Argus	The suite of programs that provides for the secure mail-exchange between healthcare providers (GPs, pathology labs, psychiatrists etc.).
ArgusMessenger	This is a program that interacts with POP3/SMTP, IMAP and LDAP servers. It implements advanced HL7 handling and encryption via PKI. One instance of ArgusMessenger runs in each practice.
ArgusMail	This is the 'client', a program that allows users to view and send email. An instance of ArgusMail runs on each user's desktop.
ArgusAgent	This is a program that can be run in background mode to fire defined events at designated intervals. Tasks include polling for files to be printed automatically and the automatic sending of documents dropped into a directory.
Message	A mail item, downloaded from the mail server and stored in an Interbase database. Messages may include attachments.
Folder	A message folder in ArgusMail, such as the Inbox. Not a file directory.

2 Purpose of this guide

This guide is intended to help a Certified Argus Installer to install, configure and test a complete Argus installation on a Mac.

2.1 Prior to installation

Before arriving at the site, a Pre-Installation Checklist should be completed. This can be found at <http://www.argusconnect.com.au/index/documentation> Ensure that it is known what clinical software is being used at the site and how it is installed, and that the installation will be done with an Administrator user account, or at least a user with Administrator rights.

3 Extracting Argus

- Copy the **Argus_v4.0.8.zip** to /Applications/.
- Double click **Argus_v4.0.8.zip** to begin the extraction process. By default BOMArchive will be used. If using Stuffit you may need to manually select the destination directory. Make sure you create a new folder, then select it as the destination. If you cannot select an installation folder, you may need to move the Argus folder manually to your chosen destination (typically Macintosh HD/Applications).
- Once extraction has completed, use Finder to copy ark.bin locally onto the machine. Once in Argus you can only browse the harddrive; you will not be able to access a CD, USB flash drive or floppy disk so make sure the file is copied locally onto the harddrive of the machine.
- Use Finder to browse to the folder /Argus/Client/. Then, hold Ctrl and click on the ArgusMail application file. Select *Make Alias*, which creates an alias, or shortcut, for that application file. You can then move this icon to the desktop, or dock, etc.
- Make an alias for the following programs:
 - Argus Messenger (location: /Argus/Server/)
 - Argus Agent (location: /Argus/Server/)
 - Argus Mail (location: /Argus/Client/)
 then copy to the desktop.

4 Installing Firebird

- Using Finder navigate to the Argus installation folder (/Applications/Argus). Open the Third-Party folder, and double click on **Firebird-CS-1.5.pkg**. This will start an automatic installer.
- When installing, you can accept all defaults.
- When asked for an installation location, select Macintosh HD.
- The default locations for the Interbase Server Bin directory and security database are:
/Libraries/Frameworks/Firebird.framework/Versions/A/Resources/English.lproj/var/
- You can verify that Firebird is running you can load Activity Manager (/Applications/Utilities/). Change to view all processes, and look for fb_inet_server in the list of running processes.

5 Configuring ArgusMessenger

- Load Argus Messenger by double clicking the alias icon created previously.
 - Configure Argus Messenger as normal
- Note:
- you cannot setup Auto run. This is configured later, using a crontab event.
 - Also, rules can only drop files locally – you cannot export to a network location.

6 Configuring ArgusAgent for autorun

Autorun is configured using an *Event* in ArgusAgent. An *Event* is a process that is activated repeatedly at a user-defined interval, in order to perform an *Action*. The interval defined in ArgusAgent does not apply, however it must be set to complete the setup of an *Event*. The interval used is actually set in the crontab file, explained later. An *Event* must be configured with these (sort of) settings:

- How often must it poll
- Which directory must be polled for files to send
- What file name criteria must be looked for
- If it is pre-known, to what address must the message be sent
- What must be done with any file that gets processed
- Who is the sender of the message
- Must the message be encrypted

- Must the message be signed

An *Action* is what the *Event* does when it detects a file that matches its criteria.

6.0.1 The main screen

After logging in using the administrator details used to login to ArgusMessenger, you will see the main screen with the following areas:

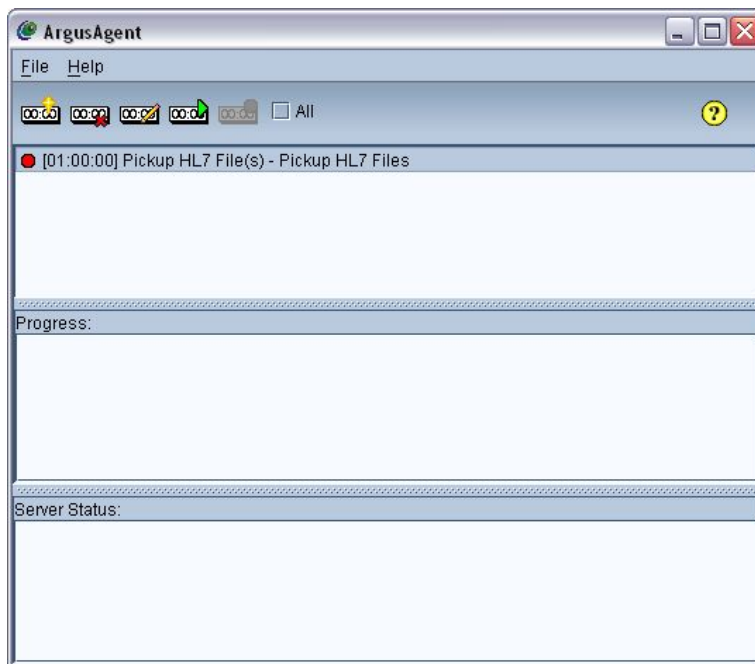


Figure 1: The ArgusAgent main screen

Events

Every *Event* you have set up is shown, along with its current status (running or stopped).

Progress

Whenever an *Event* detects a file that matches its criteria, the *Action* it takes is logged in this window.

Server Status

This list displays the same output you will see in the *ArgusMessenger* stats screen.

6.1 The main toolbar

6.1.1 Add an Event



Figure 2: The Add an Event button

Allows a new *Event* to be set up. Clicking this button opens the Event Wizard, which guides the user step-by-step through configuring an event. Also, when picking up a file, be sure to specify the type of file by its extension type. In OSX a file is created in each directory containing view settings for browsing purposes, and this file will cause problems if you do not specify a file extension, as below.

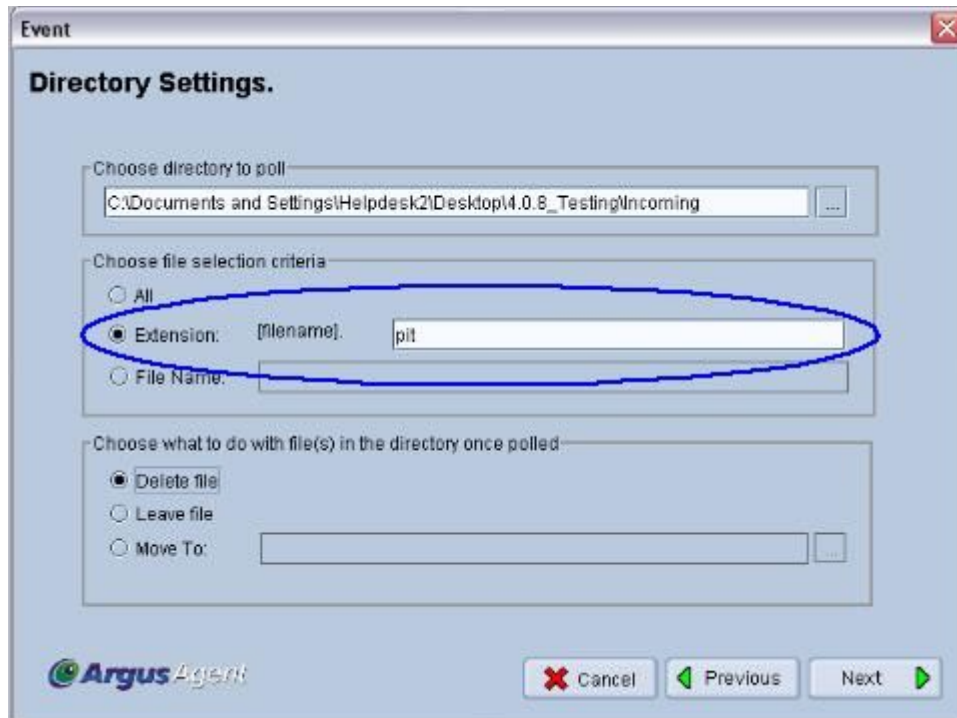


Figure 3: Specifying a pickup file extension

6.1.2 Remove an Event



Figure 4: The Remove an Event button

Deletes an existing *Event*.

6.1.3 Edit an Event

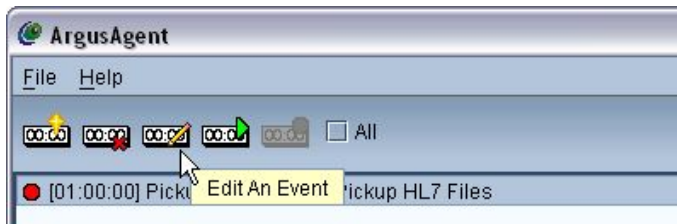


Figure 5: The Edit an Event button

Allows the settings of an existing *Event* to be modified.

6.1.4 Start an Event



Figure 6: The Start an Event button

Initiates the countdown to fire the selected *Event*. More than one *Event* can be counting down simultaneously.

6.1.5 Stop an Event



Figure 7: The Stop an Event button

Stops the countdown of the selected existing *Event*.

6.1.6 Setting Autorun



Figure 8: Configuring Auto Synchronise

ArgusAgent can be configured to load up, run all active events and shut itself automatically. This will generate a file called *ArgusAgentSync.cfg* which is referenced every time the AutoSynchronise occurs. You must re-run this step to finalise any event changes.

When *ArgusAgent* starts a synchronisation it creates a locking file *argusagentsync.lk* on the local hard drive that is deleted when the process finishes. As long as *ArgusAgent* detects the presence of this lock file it will not start a new synchronise.

The menu initiates a simple wizard that requires the setting of the time for which the lock file will exist.

Note: This is a feature for Windows installation, and has no effect on Mac. However, you still need to enter a value to progress to the next stage.

This prevents the problem of having *ArgusAgent* restart after a power cut and fail to ever do a synchronise because it keeps detecting an old lock file.

7 Configuring crontab

7.1 What is the crontab?

The crontab is a way we can schedule jobs to run automatically at certain time intervals by use of the cron daemon. These jobs will run silently in the background without input from the user. The crontab file is accessible from a terminal window, and contains commands that appear as follows:

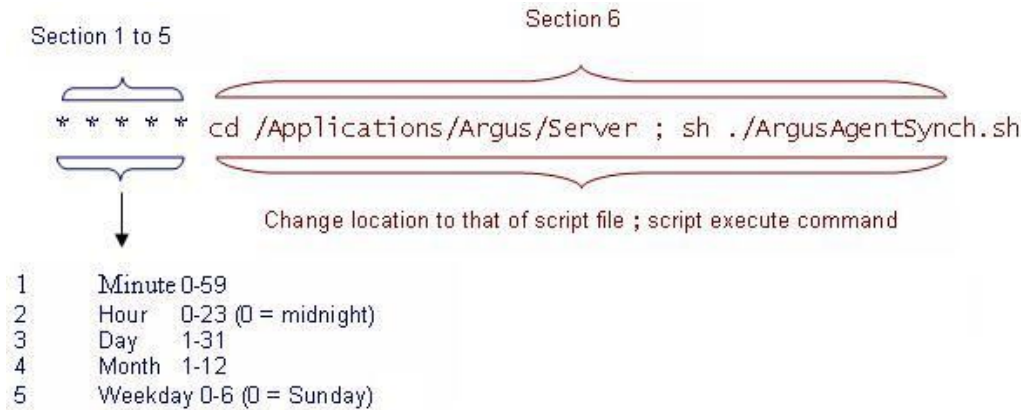


Figure 9: A crontab command

We configure the cron by entering a command line in the crontab file which will execute a shell script. This shell script references the .cfg configuration file made in the previous step.

7.2 Opening the crontab

Open a Terminal window (/Applications/Utilities/Terminal). Type the command **crontab -e**

- Other crontab commands:
 - -e = edit mode => Used for modifying the crontab
 - -l = list mode => Will display crontab to screen.
 - -r = remove => removes crontab completely from system

You will now see your crontab file (which may well be empty). It will have been opened with the default text editor, which is usually vi. There are some basic vi commands which need to be learned in order to begin modifying your cron file.

7.3 Editing the crontab

There are two modes in this text editor – **Command mode** and **Text edit mode**. Command mode allows the user to move the cursor along the lines. Text edit mode allows the user to do just that, insert and edit text. To escape out of Text edit mode, press escape. To move into Text edit mode, press one of the following.

- Text edit mode keys:
 - i – enter text before cursor
 - a – append text after cursor
 - o – enter a new line below the cursor
 - O – enter a new line above the cursor
- Command mode keys:
 - x – delete text at cursor
 - dd – delete an entire line
 - :q! – quit without saving
 - :wq – save changes

There are, of course, many more commands you can use but these basic commands will allow you to create, modify and execute a crontab. You need to enter one line to the crontab, as below:

```
* /20 * * * * cd /Applications/Argus/Server ; sh ./ArgusAgentSynch.sh
```

7.3.1 Creating the config files

This command in the cron will reference two configuration files that must exist. They are `ArgusAgentSynch.cfg` (created in step 6.1.6) and `ArgusMessengerSynch.cfg`. These files should be created using a Terminal command line. To create `ArgusAgentSynch.cfg` manually, enter the following commands:

```
/root$>cd ../  
/root$>cd /Applications/Argus/Server  
/root$>sh ./ArgusAgentSynch.sh
```

When creating `ArgusMessengerSynch.cfg`, execute `CreateArgusMessengerSynchConfig`. You will need to enter some variables to the command line (`<host>` `<database location>` `<database password>` `<lock file timeout in mins>`) to generate this config file successfully.

```
/root$>cd ../  
/root$>cd /Applications/Argus/Server  
/root$>sh ./CreateArgusMessengerSynchConfig.sh localhost /Applications/Argus/Database/Argus.gdb masterkey 5
```

Keep in mind, the crontab command runs `ArgusAgent`, which in turn runs all events (using `ArgusAgentSynch.cfg`) then synchronises (using `ArgusMessengerSynch.cfg`).

8 Hints, allegations and things left unsaid

ArgusAgent allows Argus to accommodate requirements for which it was never specifically designed. As such, its use is discouraged in favour of making direct calls to the Argus API, but the Argus team accepts the inevitability that some software vendors are unwilling or unable to modify their programs accordingly.

If you have any suggestions for future versions of Argus, please feel free to contact ArgusConnect with your suggestion. You can send an email to support@argusconnect.com.au or phone the ArgusConnect helpdesk on (03) 5335 2221 during business hours.

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