

# Debian Med

## Integrated software environment for all medical applications

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When people hear for the first time the term ‘Debian Med’ there are usually two kinds of misconceptions. Let us dispel these in advance, so as to clarify subsequent discussion of the project.

People familiar with Debian as a large distribution of Free Software usually imagine Debian Med to be some kind of customised derivative of Debian tailored for use in a medical environment. Astonishingly, the idea that such customisation can be done entirely *within* Debian itself is not well known and the technical term *Debian Pure Blend* seems to be sufficiently unknown outside of the Debian milieu that many people fail to appreciate the concept correctly. There are no separate repositories like Personal Package Archives (PPA) as introduced by Ubuntu for additional software not belonging to the official distribution or something like that – a Debian Pure Blend (as the term ‘pure’ implies) is Debian itself and if you have received Debian you have full Debian Med at your disposal. There are other Blends inside Debian like Debian Science, Debian Edu, Debian GIS and others.

People working in the health care professions sometimes acquire another misconception about Debian Med, namely that Debian Med is some kind of software primarily dedicated to managing a doctor’s practice. Sometimes people even assume that people assume the Debian Med team actually develops this software. However, the truth about the Debian Med team is that we are a group of Debian developers hard at work incorporating *existing* medical software right into the Debian distribution. We can hardly include software that does not yet exist and so we try to cherry-pick the Free Software that is useful for medical care tasks. Because we do not restrict ourselves to pure practice management, Debian now contains not only two practice management systems (GNUmed and FreeMedForms), but much other software useful in medical care as well. Bioinformatics (next generation sequencing, phylogeny, etc.) and medical imaging are two such fields of particular importance. We do also maintain a to-do list of software that should be included as time and manpower permits. For instance one of the main candidates on the horizon is VistA - an integrated health information system which is successfully running in several hospitals.

Having clarified the misconceptions about Debian Med, let us now give a positive definition: Debian Med is a pure subset of Debian that tries to integrate all existing Free Software that might be used in any subfield of medical care. In other words it is a Debian Pure Blend covering medical and microbiological software.

The Debian Med project started in 2002 with a very small team but in the meantime has evolved to include about 25 participants, each working in various capacities to

increase the pool of available, relevant medical software in the Debian repositories and maintain Debian's infrastructure specifically targeting at Debian Pure Blends needs, enabling efficient access to said resources. Due to their involvement with the Debian Med project, ten contributors have become Debian developers. Thus the Debian Med project serves to recruit talented new developers into the Debian fold.

Debian Med to a certain extent serves as a missing link between the developers of Free Software medical applications (in Debian slang 'upstream') and the end users who install them. The project significantly eases the effort of software installation on a system by using so called 'metapackages'. Metapackages are making use of an important feature of the Debian packaging system to define relations between packages (containing software that depends from each other). So a metapackage does not actually contain some software the user will run but it rather defines dependencies from other software. Metapackages assembled by the Debian Med team denote collections of software that are commonly used together to accomplish a given sort of task—medical tasks, in this case.

In addition Debian Med attends to security problems and bugfixes and quite frequently we support upstream developers with patches to enhance their software. Because of this we have established rather good connections with the authors of the software in our area and encourage the formation of a large community around the Free Software universe of medical resources – on the solid and well known technical basis of the Debian distribution.

Once people have understood the Debian Med idea they often begin to fantasise: "Oh, that's nice. I could accomplish my medical IT tasks without spending any money anymore, wonderful." Well, that is indeed a pleasant dream, but honesty requires us to provide you with a reality check. Yes, you get the software to use with no licensing costs to pay, and this will certainly reduce your effective costs. We also should point out that it is not only free of charge but high quality as well, which can be verified by inspecting the code. We will never play dirty tricks with your data and we will never be the stumbling stone when it comes to porting your data from one system to another.

Nonetheless the fact remains that healthcare on the one hand, and computer science on the other, are complex fields of endeavor and you will rarely find professionals who are experts in both fields at the same time. It is said that knowledge is power, and that with power comes responsibility. But whenever you rely on an IT system, *someone* must take responsibility for its maintenance. So if you are working in health care you are responsible for the health of the patient and not primarily for the health of your IT systems. In other words: You must ultimately spend some money to hire an IT expert who will maintain your IT infrastructure and provide the service you need for your work.

Debian Med targets at your IT service provider, equipping them with high quality software free of charge with strong established ties to the community that develops it. Freely available source code unencumbered by proprietary licenses means they can adapt the code to the needs of their clients and become part of the fascinating world of Free Software by passing back their enhancements to the upstream developers. These unique features of Free Software put those IT service providers selling support for Free Software in medical care in a very good position compared to those selling proprietary software: They can provide better service for less money. In the final analysis, their clients in the medical professions will profit as well from better service for less money, and this where reality approaches, but does not attain, the fantasy of a cost-free medical IT system.

In summary, Debian Med strives to maintain the foundation on which you can build

a cheaper, more reliable and more flexible IT infrastructure for medical care while at the same time gaining independence from proprietary companies.

As you probably know, there are many derivatives of Debian (Ubuntu, Linux Mint, etc.) – it is actually the most derived existing Linux distribution. The advantage of working strictly within Debian has the positive side effect that all its derivatives profit from the work of the Debian Med team as well. For example, there even exist strong connections to derivatives like [BioLinux](#) an Ubuntu derivative which works closely with Debian Med to profit from our work via Ubuntu.

How to get more information about the project:

- [Overview about packaged software \(and software we are working on\)](#)
- [Policy if you want to start joining the development process](#)
- [Several talks about Debian Med and related topics, some also video recorded](#)

Many thanks go to all contributors to Debian and Debian Med, *i.e.*, the providers of the packages, the developers of the Free Software and to all those who donate time and resources for the project.