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#### **Contents**

NUANCE® FREE AND OPEN-SOURCE LICENSING NOTICES FOR XT9 PRODUCTS			
DOCUMENT OVERVIEW			
OSS PACKAGE NOTICES			
USS PACKAGE NUTICES			
CRF++ (CRFPP)			
KANJIDIC	3		
LINUX KERNEL	6		
MECAB	43		
MECAB-IPADIC-NEOLOGD	44		
OPENWNN	46		
Perl	46		
Python	48		
STANDARD OSS LICENSE TEXT	69		
Apache-2.0	65		
Artistic-1.0-Perl	67		
CC-BY-SA-3.0	69		
GPL-1.0	74		
GPL-2.0	77		
GPL-3.0	82		
LGPL-2.0	90		
LGPL-2.1	90		
LGPL-3.0	102		

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   ::
   SPDX-License-Identifier: MIT
   SPDX-URL: https://spdx.org/licenses/MIT.html
  Usage-Guide:
        To use this license in source code, put the following SPDX
        tag/value pair into a comment according to the placement
        guidelines in the licensing rules documentation.
          SPDX-License-Identifier: MIT
  License-Text:
 Full license text
2. Deprecated licenses:
  These licenses should only be used for existing code or for importing
   code from a different project. These licenses are available from the
   directory::
  LICENSES/deprecated/
   in the kernel source tree.
   The files in this directory contain the full license text and
   `Metatags` . The file names are identical to the SPDX license
   identifier which shall be used for the license in source files.
   Examples::
   LICENSES/deprecated/ISC
  Contains the Internet Systems Consortium license text and the required
   metatags::
```



LICENSES/deprecated/GPL-1.0 Contains the GPL version 1 license text and the required metatags. Metatags: The metatag requirements for 'other' licenses are identical to the requirements of the `Preferred licenses`\_. File format example:: Valid-License-Identifier: ISC SPDX-URL: https://spdx.org/licenses/ISC.html Usage-Guide: Usage of this license in the kernel for new code is discouraged and it should solely be used for importing code from an already existing project. To use this license in source code, put the following SPDX tag/value pair into a comment according to the placement guidelines in the licensing rules documentation. SPDX-License-Identifier: ISC License-Text: Full license text 3. Dual Licensing Only These licenses should only be used to dual license code with another license in addition to a preferred license. These licenses are available from the directory:: LICENSES/dual/ in the kernel source tree. The files in this directory contain the full license text and `Metatags`\_. The file names are identical to the SPDX license identifier which shall be used for the license in source files. Examples:: LICENSES/dual/MPL-1.1 Contains the Mozilla Public License version 1.1 license text and the required metatags::



LICENSES/dual/Apache-2.0 Contains the Apache License version 2.0 license text and the required metatags. Metatags: The metatag requirements for 'other' licenses are identical to the requirements of the `Preferred licenses` . File format example:: Valid-License-Identifier: MPL-1.1 SPDX-URL: https://spdx.org/licenses/MPL-1.1.html Usage-Guide: Do NOT use. The MPL-1.1 is not GPL2 compatible. It may only be used for dual-licensed files where the other license is GPL2 compatible. If you end up using this it MUST be used together with a GPL2 compatible license using "OR". To use the Mozilla Public License version 1.1 put the following SPDX tag/value pair into a comment according to the placement guidelines in the licensing rules documentation: SPDX-License-Identifier: MPL-1.1 License-Text: Full license text 4. \_`Exceptions`: Some licenses can be amended with exceptions which grant certain rights which the original license does not. These exceptions are available from the directory:: LICENSES/exceptions/ in the kernel source tree. The files in this directory contain the full exception text and the required `Exception Metatags`\_. Examples:: LICENSES/exceptions/Linux-syscall-note Contains the Linux syscall exception as documented in the COPYING file of the Linux kernel, which is used for UAPI header files. e.g. //\* SPDX-License-Identifier: GPL-2.0 WITH Linux-syscall-note \\*/::



LICENSES/exceptions/GCC-exception-2.0

Contains the GCC 'linking exception' which allows to link any binary independent of its license against the compiled version of a file marked with this exception. This is required for creating runnable executables from source code which is not compatible with the GPL.

\_`Exception Metatags`:

The following meta tags must be available in an exception file:

- SPDX-Exception-Identifier:

One exception identifier which can be used with SPDX license identifiers.

- SPDX-URL:

The URL of the SPDX page which contains additional information related to the exception.

- SPDX-Licenses:

A comma separated list of SPDX license identifiers for which the exception can be used.

- Usage-Guidance:

Freeform text for usage advice. The text must be followed by correct examples for the SPDX license identifiers as they should be put into source files according to the `License identifier syntax`\_ guidelines.

- Exception-Text:

All text after this tag is treated as the original exception text

File format examples::

SPDX-Exception-Identifier: Linux-syscall-note
SPDX-URL: https://spdx.org/licenses/Linux-syscall-note.html

SPDX-Licenses: GPL-2.0, GPL-2.0+, GPL-1.0+, LGPL-2.0, LGPL-2.0+, LGPL-2.1, LGPL-2.1+

Usage-Guidance:

This exception is used together with one of the above SPDX-Licenses to mark user-space API (uapi) header files so they can be included into non GPL compliant user-space application code.

To use this exception add it with the keyword WITH to one of the



identifiers in the SPDX-Licenses tag:

SPDX-License-Identifier: <SPDX-License> WITH Linux-syscall-note
Exception-Text:

Full exception text

::

SPDX-Exception-Identifier: GCC-exception-2.0

SPDX-URL: https://spdx.org/licenses/GCC-exception-2.0.html

SPDX-Licenses: GPL-2.0, GPL-2.0+

Usage-Guidance:

The "GCC Runtime Library exception 2.0" is used together with one of the above SPDX-Licenses for code imported from the GCC runtime library.

To use this exception add it with the keyword WITH to one of the identifiers in the SPDX-Licenses tag:

SPDX-License-Identifier: <SPDX-License> WITH GCC-exception-2.0

Exception-Text:

Full exception text

All SPDX license identifiers and exceptions must have a corresponding file in the LICENSES subdirectories. This is required to allow tool verification (e.g. checkpatch.pl) and to have the licenses ready to read and extract right from the source, which is recommended by various FOSS organizations, e.g. the `FSFE REUSE initiative <a href="https://reuse.software/">https://reuse.software/</a>.

\_`MODULE\_LICENSE`

\_\_\_\_\_

Loadable kernel modules also require a MODULE\_LICENSE() tag. This tag is neither a replacement for proper source code license information (SPDX-License-Identifier) nor in any way relevant for expressing or determining the exact license under which the source code of the module is provided.

The sole purpose of this tag is to provide sufficient information whether the module is free software or proprietary for the kernel module loader and for user space tools.

The valid license strings for MODULE\_LICENSE() are:

\_\_\_\_\_\_

"GPL"

Module is licensed under GPL version 2. This does not express any distinction between GPL-2.0-only or GPL-2.0-or-later. The exact license information can only be determined



via the license information in the corresponding source files.

"GPL v2"

Same as "GPL". It exists for historic reasons.

"GPL and additional rights" Historical variant of expressing that the module source is dual licensed under a GPL v2 variant and MIT license. Please do not use in new code.

"Dual MIT/GPL"

The correct way of expressing that the module is dual licensed under a GPL v2 variant or MIT license choice.

"Dual BSD/GPL"

The module is dual licensed under a GPL v2 variant or BSD license choice. The exact variant of the BSD license can only be determined via the license information in the corresponding source files.

"Dual MPL/GPL"

The module is dual licensed under a GPL v2 variant or Mozilla Public License (MPL) choice. The exact variant of the MPL license can only be determined via the license information in the corresponding source files.

"Proprietary"

The module is under a proprietary license.

This string is solely for proprietary third party modules and cannot be used for modules which have their source code in the kernel tree. Modules tagged that way are tainting the kernel with the 'P' flag when loaded and the kernel module loader refuses to link such modules against symbols which are exported with EXPORT SYMBOL GPL().

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#### /Documentation/translations/zh\_CN/process/license-rules.rst:

- .. SPDX-License-Identifier: GPL-2.0
- .. include:: ../disclaimer-zh CN.rst

:Original: :ref:`Documentation/process/license-rules.rst <kernel licensing>` :Translator: Alex Shi <alex.shi@linux.alibaba.com>

.. cn kernel licensing:



Linux内核许可规则

Linux内核根据LICENSES/preferred/GPL-2.0中提供的GNU通用公共许可证版本2 (GPL-2.0) 的条款提供,并在LICENSES/exceptions/Linux-syscall-note中显式描述了例外的系统调用,如COPYING文件中所述。

**此文档文件提供了如何**对每个源文件进行注释以使其许可证清晰明确的说明。 **它不会取代内核的**许可证。

内核源代码作为一个整体适用于COPYING文件中描述的许可证,但是单个源文件可以 具有不同的与GPL-20兼容的许可证::

GPL-1.0+ : GNU**通用公共**许可证v1.0**或更高版本** 

GPL-2.0+ : GNU**通用公共**许可证v2.0或更高版本

LGPL-2.0 : 仅限GNU库通用公共许可证v2

LGPL-2.0+: GNU 库通用公共许可证v2或更高版本

LGPL-2.1 : 仅限GNU宽通用公共许可证v2.1

LGPL-2.1+: GNU宽通用公共许可证v2.1或更高版本

**除此之外,个人文件可以在双重**许可下提供·例如一个兼容的GPL变体·或者BSD, MIT等许可。

用户空间API(UAPI)头文件描述了用户空间程序与内核的接口,这是一种特殊情况。 根据内核COPYING文件中的注释,syscall接口是一个明确的边界,它不会将GPL要求 扩展到任何使用它与内核通信的软件。由于UAPI头文件必须包含在创建在Linux内核 上运行的可执行文件的任何源文件中,因此此例外必须记录在特别的许可证表述中。

表达源文件许可证的常用方法是将匹配的样板文本添加到文件的顶部注释中。由于格式,拼写错误等,这些"样板"**很**难通过那些在上下文中使用的验证许可证合规性的工具。

样板文本的替代方法是在**每个源文件中使用**软件包数据交换(SPDX)许可证标识符。 SPDX许可证标识符是机器可解析的·并且是用于提供文件内容的许可证的精确缩写。 SPDX许可证标识符由Linux **基金会的**SPDX **工作**组管理·并得到了整个行业·工具 供应商和法律团队的合作伙伴的一致同意。有关详细信息·请参阅



https://spdx.org/

Linux内核需要所有源文件中的精确SPDX标识符。内核中使用的有效标识符在 `许可标识符`\_ 一节中进行了解释·并且已可以在 https://spdx.org/licenses/ **上的官方**SPDX许可证列表中检索·并附带许可证文本。

许可标识符语法

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#### 1.安置:

内核文件中的SPDX许可证标识符应添加到可包含注释的文件中的第一行。对于大多数文件,这是第一行,除了那些在第一行中需要'#!PATH\_TO\_INTERPRETER'的脚本。对于这些脚本,SPDX标识符进入第二行。

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#### 2. 风格:

SPDX许可证标识符以注释的形式添加。注释样式取决于文件类型::

如果特定工具无法处理标准注释样式,则应使用工具接受的相应注释机制。这是在 C 头文件中使用"//\*/\*/样式注释的原因。过去在使用生成的.lds**文件中**观察到 构建被破坏,其中'ld'无法解析C++注释。现在已经解决了这个问题,但仍然有较 旧的汇编程序工具无法处理C++样式的注释。

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#### 3. 句法:

<spdx许可证表达式>是spdx许可证列表中的spdx短格式许可证标识符,或者在许可证例外适用时由\with\分隔的两个spdx短格式许可证标识符的组合。当应用多个许可证时,表达式由分隔子表达式的关键字\and\n,\nor\u00e4组成,并由\(\nu\)\(\nu\)\(\nu\)\(\nu\)



```
带有"或更高"选项的[L]GPL等许可证的许可证标识符通过使用"+"来表示"或更高"
选项来构建。::
// SPDX-License-Identifier: GPL-2.0+
// SPDX-License-Identifier: LGPL-2.1+
当需要修正的许可证时,应使用WITH。 例如, linux内核UAPI文件使用表达式::
// SPDX-License-Identifier: GPL-2.0 WITH Linux-syscall-note
// SPDX-License-Identifier: GPL-2.0+ WITH Linux-syscall-note
其它在内核中使用WITH例外的事例如下::
// SPDX-License-Identifier: GPL-2.0 WITH mif-exception
// SPDX-License-Identifier: GPL-2.0+ WITH GCC-exception-2.0
例外只能与特定的许可证标识符一起使用。有效的许可证标识符列在异常文本文件
的标记中。有关详细信息,请参阅`许可标识符`一章中的`例外`。
如果文件是双重许可且只选择一个许可证·则应使用OR。例如,一些dtsi文件在双
许可下可用::
// SPDX-License-Identifier: GPL-2.0 OR BSD-3-Clause
内核中双许可文件中许可表达式的示例::
// SPDX-License-Identifier: GPL-2.0 OR MIT
// SPDX-License-Identifier: GPL-2.0 OR BSD-2-Clause
// SPDX-License-Identifier: GPL-2.0 OR Apache-2.0
// SPDX-License-Identifier: GPL-2.0 OR MPL-1.1
// SPDX-License-Identifier: (GPL-2.0 WITH Linux-syscall-note) OR MIT
// SPDX-License-Identifier: GPL-1.0+ OR BSD-3-Clause OR OpenSSL
如果文件具有多个许可证·其条款全部适用于使用该文件·则应使用AND。例如,
如果代码是从另一个项目继承的,并且已经授予了将其放入内核的权限,但原始
许可条款需要保持有效::
// SPDX-License-Identifier: (GPL-2.0 WITH Linux-syscall-note) AND MIT
```

Page 22 of 104

另一个需要遵守两套许可条款的例子是::



// SPDX-License-Identifier: GPL-1.0+ AND LGPL-2.1+

许可标识符

-----

**当前使用的**许可证以及添加到内核的代码许可证可以分解为:

1. \_`优先许可`:

应尽可能使用这些许可证·因为它们已知完全兼容并广泛使用。这些许可证在内核 目录::

LICENSES/preferred/

**此目**录中的文件包含完整的许可证文本和 `元标记`\_ 。**文件名与**SPDX许可证标识 **符相同,后者**应用于源文件中的许可证。

例如::

LICENSES/preferred/GPL-2.0

包含GPLv2许可证文本和所需的元标签::

LICENSES/preferred/MIT

包含MIT许可证文本和所需的元标记

`**元**标记`:

许可证文件中必须包含以下元标记:

- Valid-License-Identifier:

一行或多行, 声明那些许可标识符在项目内有效, 以引用此特定许可的文本。通常这是一个有效的标识符, 但是例如对于带有'或更高'选项的许可证, 两个标识符都有效。

- SPDX-URL:

SPDX页面的URL, 其中包含与许可证相关的其他信息.



- Usage-Guidance:

使用建议的自由格式文本。该文本必须包含SPDX许可证标识符的正确示例,因为 它们应根据、许可标识符语法、 **指南放入源文件中**。

- License-Text:

此标记之后的所有文本都被视为原始许可文本

#### 文件格式示例::

```
Valid-License-Identifier: GPL-2.0
Valid-License-Identifier: GPL-2.0+
SPDX-URL: https://spdx.org/licenses/GPL-2.0.html
Usage-Guide:
To use this license in source code, put one of the following SPDX
      tag/value pairs into a comment according to the placement
      quidelines in the licensing rules documentation.
      For 'GNU General Public License (GPL) version 2 only' use:
        SPDX-License-Identifier: GPL-2.0
      For 'GNU General Public License (GPL) version 2 or any later version' use:
        SPDX-License-Identifier: GPL-2.0+
License-Text:
Full license text
 SPDX-License-Identifier: MIT
 SPDX-URL: https://spdx.org/licenses/MIT.html
Usage-Guide:
      To use this license in source code, put the following SPDX
      tag/value pair into a comment according to the placement
      quidelines in the licensing rules documentation.
        SPDX-License-Identifier: MIT
License-Text:
Full license text
```

#### 2. 不推荐的许可证:

这些许可证只应用于现有代码或从其他项目导入代码。这些许可证在内核目录::

LICENSES/other/



**此目**录中的文件包含完整的许可证文本和 `元标记`\_ 。**文件名与**SPDX许可证标识符相同,后者应用于源文件中的许可证。

#### 例如::

LICENSES/other/ISC

包含国际系统联合许可文本和所需的元标签::

LICENSES/other/ZLib

包含ZLIB许可文本和所需的元标签.

#### 元标签:

"其他"许可证的元标签要求与 `优先许可` 的要求相同。

#### 文件格式示例::

```
Valid-License-Identifier: ISC
SPDX-URL: https://spdx.org/licenses/ISC.html
Usage-Guide:
```

Usage of this license in the kernel for new code is discouraged and it should solely be used for importing code from an already existing project.

To use this license in source code, put the following SPDX tag/value pair into a comment according to the placement guidelines in the licensing rules documentation.

SPDX-License-Identifier: ISC

License-Text:
Full license text

#### 3. \_`**例外**`:

某些许可证可以修改,并允许原始许可证不具有的某些例外权利。这些例外在

#### 内核目录::

LICENSES/exceptions/

此目录中的文件包含完整的例外文本和所需的 `例外元标记`。



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LICENSES/exceptions/Linux-syscall-note

包含Linux内核的COPYING文件中记录的Linux系统调用例外,该文件用于UAPI 头文件。例如::

LICENSES/exceptions/GCC-exception-2.0

**包含**GCC'链接例外',**它允**许独立于其许可证的任何二进制文件与标记有此例外的 **文件的**编译版本链接。这是从GPL**不兼容源代**码创建可运行的可执行文件所必需的。

`**例外元**标记`:

以下元标记必须在例外文件中可用:

- SPDX-Exception-Identifier:
- 一个可与SPDX许可证标识符一起使用的例外标识符。
- SPDX-URL:

SPDX页面的URL, 其中包含与例外相关的其他信息。

- SPDX-Licenses:

以逗号分隔的例外可用的SPDX许可证标识符列表。

- Usage-Guidance:

使用建议的自由格式文本。必须在文本后面加上SPDX许可证标识符的正确示例。 因为它们应根据、许可标识符语法、 **指南放入源文件中**。

- Exception-Text:

此标记之后的所有文本都被视为原始异常文本

#### 文件格式示例::

SPDX-Exception-Identifier: Linux-syscall-note
SPDX-URL: https://spdx.org/licenses/Linux-syscall-note.html



```
SPDX-Licenses: GPL-2.0, GPL-2.0+, GPL-1.0+, LGPL-2.0, LGPL-2.0+, LGPL-2.1, LGPL-
2.1+
  Usage-Guidance:
 This exception is used together with one of the above SPDX-Licenses
        to mark user-space API (uapi) header files so they can be included
        into non GPL compliant user-space application code.
 To use this exception add it with the keyword WITH to one of the
        identifiers in the SPDX-Licenses tag:
          SPDX-License-Identifier: <SPDX-License> WITH Linux-syscall-note
  Exception-Text:
 Full exception text
   ::
  SPDX-Exception-Identifier: GCC-exception-2.0
  SPDX-URL: https://spdx.org/licenses/GCC-exception-2.0.html
  SPDX-Licenses: GPL-2.0, GPL-2.0+
  Usage-Guidance:
 The "GCC Runtime Library exception 2.0" is used together with one
        of the above SPDX-Licenses for code imported from the GCC runtime
        library.
 To use this exception add it with the keyword WITH to one of the
        identifiers in the SPDX-Licenses tag:
          SPDX-License-Identifier: <SPDX-License> WITH GCC-exception-2.0
  Exception-Text:
 Full exception text
```

所有SPDX许可证标识符和例外都必须在LICENSES子目录中具有相应的文件。这是允许 工具验证(例如checkpatch.pl)以及准备好从源读取和提取许可证所必需的,这是 各种FOSS组织推荐的·例如 `FSFE REUSE initiative <a href="https://reuse.software/">https://reuse.software/>`\_.

# \_`**模**块许可`

可加载内核模块还需要MODULE\_LICENSE()标记。此标记既不替代正确的源代码许可证信息(SPDX-License-Identifier),也不以任何方式表示或确定提供模块

源代码的确切许可证。

此标记的唯一目的是提供足够的信息·该模块是否是自由软件或者是内核模块加载器和用户空间工具的专有模块。

MODULE LICENSE()的有效许可证字符串是:



"GPL"

模块是根据GPL版本2许可的。这并不表示仅限于

GPL-2.0或GPL-2.0或更高版本之间的任何区别。

最正确许可证信息只能通过相应源文件中的许可证

信息来确定

"GPL v2"

**和"**GPL**"相同,它的存在是因**为历史原因。

- "GPL and additional rights" 表示模块源在GPL v2变体和MIT许可下双重许可的 历史变体。请不要在新代码中使用。
- "Dual MIT/GPL" 表达该模块在GPL v2变体或MIT许可证选择下双重 许可的正确方式。
- "Dual BSD/GPL" 该模块根据GPL v2变体或BSD许可证选择进行双重 许可。 BSD许可证的确切变体只能通过相应源文件 中的许可证信息来确定。
- "Dual MPL/GPL" 该模块根据GPL v2变体或Mozilla Public License (MPL) 选项进行双重许可。 MPL许可证的确切变体 只能通过相应的源文件中的许可证信息来确定。
- "Proprietary" 该模块属于专有许可。此字符串仅用于专有的第三

方模块,不能用于在内核树中具有源代码的模块。

以这种方式标记的模块在加载时会使用'P'标记污

**染内核**,**并且内核模**块加载器拒绝将这些模块链接

到使用EXPORT SYMBOL GPL () 导出的符号。

#### /Documentation/translations/it\_IT/process/license-rules.rst:

- .. SPDX-License-Identifier: GPL-2.0
- .. include:: ../disclaimer-ita.rst

:Original: :ref:`Documentation/process/license-rules.rst <kernel\_licensing>`:Translator: Federico Vaga <federico.vaga@vaga.pv.it>

.. it kernel licensing:

Regole per licenziare il kernel Linux



\_\_\_\_\_

Il kernel Linux viene rilasciato sotto i termini definiti dalla seconda versione della licenza \*GNU General Public License\* (GPL-2.0), di cui una copia è disponibile nel file LICENSES/preferred/GPL-2.0; a questo si aggiunge eccezione per le chiamate di sistema come descritto in LICENSES/exceptions/Linux-syscall-note; tutto ciò è descritto nel file COPYING.

Questo documento fornisce una descrizione su come ogni singolo file sorgente debba essere licenziato per far si che sia chiaro e non ambiguo. Questo non sostituisce la licenza del kernel.

La licenza descritta nel file COPYING si applica ai sorgenti del kernel nella loro interezza, quindi i singoli file sorgenti possono avere diverse licenze ma devono essere compatibili con la GPL-2.0::

GPL-1.0+ : GNU General Public License v1.0 o successiva

GPL-2.0+ : GNU General Public License v2.0 o successiva

LGPL-2.0 : GNU Library General Public License v2

LGPL-2.0+: GNU Library General Public License v2 o successiva

LGPL-2.1 : GNU Lesser General Public License v2.1

LGPL-2.1+: GNU Lesser General Public License v2.1 o successiva

A parte questo, i singolo file possono essere forniti con una doppia licenza, per esempio con una delle varianti compatibili della GPL e alternativamente con una licenza permissiva come BSD, MIT eccetera.

I file d'intestazione per l'API verso lo spazio utente (UAPI) descrivono le interfacce usate dai programmi, e per questo sono un caso speciale. Secondo le note nel file COPYING, le chiamate di sistema sono un chiaro confine oltre il quale non si estendono i requisiti della GPL per quei programmi che le usano per comunicare con il kernel. Dato che i file d'intestazione UAPI devono poter essere inclusi nei sorgenti di un qualsiasi programma eseguibile sul kernel Linux, questi meritano un'eccezione documentata da una clausola speciale.

Il modo più comune per indicare la licenza dei file sorgenti è quello di aggiungere il corrispondente blocco di testo come commento in testa a detto file. Per via della formattazione, dei refusi, eccetera, questi blocchi di testo sono difficili da identificare dagli strumenti usati per verificare il rispetto delle licenze.

Un'alternativa ai blocchi di testo è data dall'uso degli identificatori \*Software Package Data Exchange\* (SPDX) in ogni file sorgente. Gli identificatori di licenza SPDX sono analizzabili dalle macchine e sono precisi simboli stenografici che identificano la licenza sotto la quale viene licenziato il file che lo include. Gli identificatori di licenza SPDX sono



gestiti del gruppo di lavoro SPDX presso la Linux Foundation e sono stati concordati fra i soci nell'industria, gli sviluppatori di strumenti, e i rispettivi gruppi legali. Per maggiori informazioni, consultate https://spdx.org/

Il kernel Linux richiede un preciso identificatore SPDX in tutti i file sorgenti. Gli identificatori validi verranno spiegati nella sezione `Identificatori di licenza`\_ e sono stati copiati dalla lista ufficiale di licenze SPDX assieme al rispettivo testo come mostrato in https://spdx.org/licenses/.

Sintassi degli identificatori di licenza

#### 1. Posizionamento:

L'identificativo di licenza SPDX dev'essere posizionato come prima riga possibile di un file che possa contenere commenti. Per la maggior parte dei file questa è la prima riga, fanno eccezione gli script che richiedono come prima riga '#!PATH\_TO\_INTERPRETER'. Per questi script l'identificativo SPDX finisce nella seconda riga.

#### 2. Stile:

L'identificativo di licenza SPDX viene aggiunto sotto forma di commento. Lo stile del commento dipende dal tipo di file::

Se un particolare programma non dovesse riuscire a gestire lo stile principale per i commenti, allora dev'essere usato il meccanismo accettato dal programma. Questo è il motivo per cui si ha "/\\* \\*/" nei file d'intestazione C. Notammo che 'ld' falliva nell'analizzare i commenti del C++ nei file .lds che venivano prodotti. Oggi questo è stato corretto, ma ci sono in giro ancora vecchi programmi che non sono in grado di gestire lo stile dei commenti del C++.

#### 3. Sintassi:



Una <espressione di licenza SPDX> può essere scritta usando l'identificatore SPDX della licenza come indicato nella lista di licenze SPDX, oppure la combinazione di due identificatori SPDX separati da "WITH" per i casi eccezionali. Quando si usano più licenze l'espressione viene formata da sottoespressioni separate dalle parole chiave "AND", "OR" e racchiuse fra parentesi tonde "(", ")".

Gli identificativi di licenza per licenze come la [L]GPL che si avvalgono dell'opzione 'o successive' si formano aggiungendo alla fine il simbolo "+" per indicare l'opzione 'o successive'.::

```
// SPDX-License-Identifier: GPL-2.0+
// SPDX-License-Identifier: LGPL-2.1+
```

WITH dovrebbe essere usato quando sono necessarie delle modifiche alla licenza. Per esempio, la UAPI del kernel linux usa l'espressione::

```
// SPDX-License-Identifier: GPL-2.0 WITH Linux-syscall-note
// SPDX-License-Identifier: GPL-2.0+ WITH Linux-syscall-note
```

Altri esempi di usi di WITH all'interno del kernel sono::

```
// SPDX-License-Identifier: GPL-2.0 WITH mif-exception
// SPDX-License-Identifier: GPL-2.0+ WITH GCC-exception-2.0
```

Le eccezioni si possono usare solo in combinazione con identificatori di licenza. Gli identificatori di licenza riconosciuti sono elencati nei corrispondenti file d'eccezione. Per maggiori dettagli consultate `Eccezioni`\_ nel capitolo `Identificatori di licenza`\_

La parola chiave OR dovrebbe essere usata solo quando si usa una doppia licenza e solo una dev'essere scelta. Per esempio, alcuni file dtsi sono disponibili con doppia licenza::

```
// SPDX-License-Identifier: GPL-2.0 OR BSD-3-Clause
```

Esempi dal kernel di espressioni per file licenziati con doppia licenza sono::

```
// SPDX-License-Identifier: GPL-2.0 OR MIT
// SPDX-License-Identifier: GPL-2.0 OR BSD-2-Clause
// SPDX-License-Identifier: GPL-2.0 OR Apache-2.0
// SPDX-License-Identifier: GPL-2.0 OR MPL-1.1
// SPDX-License-Identifier: (GPL-2.0 WITH Linux-syscall-note) OR MIT
// SPDX-License-Identifier: GPL-1.0+ OR BSD-3-Clause OR OpenSSL
```



La parola chiave AND dovrebbe essere usata quando i termini di più licenze si applicano ad un file. Per esempio, quando il codice viene preso da un altro progetto il quale da i permessi per aggiungerlo nel kernel ma richiede che i termini originali della licenza rimangano intatti::

```
// SPDX-License-Identifier: (GPL-2.0 WITH Linux-syscall-note) AND MIT
```

Di seguito, un altro esempio dove entrambe i termini di licenza devono essere rispettati::

```
// SPDX-License-Identifier: GPL-1.0+ AND LGPL-2.1+
```

Identificatori di licenza

\_\_\_\_\_

Le licenze attualmente in uso, così come le licenze aggiunte al kernel, possono essere categorizzate in:

1. \_`Licenze raccomandate`:

Ovunque possibile le licenze qui indicate dovrebbero essere usate perché pienamente compatibili e molto usate. Queste licenze sono disponibile nei sorgenti del kernel, nella cartella::

LICENSES/preferred/

I file in questa cartella contengono il testo completo della licenza e i `Metatag`\_. Il nome di questi file è lo stesso usato come identificatore di licenza SPDX e che deve essere usato nei file sorgenti.

Esempi::

LICENSES/preferred/GPL-2.0

Contiene il testo della seconda versione della licenza GPL e i metatag necessari::

LICENSES/preferred/MIT

Contiene il testo della licenza MIT e i metatag necessari.

`Metatag`:

I seguenti metatag devono essere presenti in un file di licenza:

- Valid-License-Identifier:



Una o più righe che dichiarano quali identificatori di licenza sono validi all'interno del progetto per far riferimento alla licenza in questione. Solitamente, questo è un unico identificatore valido, ma per esempio le licenze che permettono l'opzione 'o successive' hanno due identificatori validi.

- SPDX-URL:

L'URL della pagina SPDX che contiene informazioni aggiuntive riguardanti la licenza.

- Usage-Guidance:

Testo in formato libero per dare suggerimenti agli utenti. Il testo deve includere degli esempi su come usare gli identificatori di licenza SPDX in un file sorgente in conformità con le linea guida in `Sintassi degli identificatori di licenza`\_.

- License-Text:

Tutto il testo che compare dopo questa etichetta viene trattato come se fosse parte del testo originale della licenza.

Esempi::

Valid-License-Identifier: GPL-2.0
Valid-License-Identifier: GPL-2.0+
SPDX-URL: https://spdx.org/licenses/GPL-2.0.html
Usage-Guide:

To use this license in source code, put one of the following SPDX tag/value pairs into a comment according to the placement guidelines in the licensing rules documentation.

For 'GNU General Public License (GPL) version 2 only' use:

SPDX-License-Identifier: GPL-2.0

For 'GNU General Public License (GPL) version 2 or any later version' use: SPDX-License-Identifier: GPL-2.0+

License-Text:

Full license text

::

SPDX-License-Identifier: MIT
SPDX-URL: https://spdx.org/licenses/MIT.html
Usage-Guide:

To use this license in source code, put the following SPDX tag/value pair into a comment according to the placement guidelines in the licensing rules documentation.



```
SPDX-License-Identifier: MIT
  License-Text:
 Full license text
2. Licenze deprecate:
   Questo tipo di licenze dovrebbero essere usate solo per codice già esistente
   o quando si prende codice da altri progetti. Le licenze sono disponibili
  nei sorgenti del kernel nella cartella::
 LICENSES/deprecated/
  I file in questa cartella contengono il testo completo della licenza e i
   `Metatag` . Il nome di questi file è lo stesso usato come identificatore
   di licenza SPDX e che deve essere usato nei file sorgenti.
  Esempi::
 LICENSES/deprecated/ISC
  Contiene il testo della licenza Internet System Consortium e i suoi
  metatag::
 LICENSES/deprecated/GPL-1.0
  Contiene il testo della versione 1 della licenza GPL e i suoi metatag.
  Metatag:
   I metatag necessari per le 'altre' ('other') licenze sono gli stessi
   di usati per le `Licenze raccomandate` .
  Esempio del formato del file::
  Valid-License-Identifier: ISC
  SPDX-URL: https://spdx.org/licenses/ISC.html
  Usage-Guide:
 Usage of this license in the kernel for new code is discouraged
 and it should solely be used for importing code from an already
 existing project.
 To use this license in source code, put the following SPDX
 tag/value pair into a comment according to the placement
 guidelines in the licensing rules documentation.
   SPDX-License-Identifier: ISC
  License-Text:
```



Full license text 3. Solo per doppie licenze Queste licenze dovrebbero essere usate solamente per codice licenziato in combinazione con un'altra licenza che solitamente è quella preferita. Queste licenze sono disponibili nei sorgenti del kernel nella cartella:: LICENSES/dual I file in questa cartella contengono il testo completo della rispettiva licenza e i suoi `Metatag` . I nomi dei file sono identici agli identificatori di licenza SPDX che dovrebbero essere usati nei file sorgenti. Esempi:: LICENSES/dual/MPL-1.1 Questo file contiene il testo della versione 1.1 della licenza \*Mozilla Pulic License\* e i metatag necessari:: LICENSES/dual/Apache-2.0 Questo file contiene il testo della versione 2.0 della licenza Apache e i metatag necessari. Metatag: I requisiti per le 'altre' ('\*other\*') licenze sono identici a quelli per le `Licenze raccomandate` . Esempio del formato del file:: Valid-License-Identifier: MPL-1.1 SPDX-URL: https://spdx.org/licenses/MPL-1.1.html Usage-Guide: Do NOT use. The MPL-1.1 is not GPL2 compatible. It may only be used for dual-licensed files where the other license is GPL2 compatible. If you end up using this it MUST be used together with a GPL2 compatible license using "OR". To use the Mozilla Public License version 1.1 put the following SPDX

tag/value pair into a comment according to the placement guidelines in

the licensing rules documentation:

SPDX-License-Identifier: MPL-1.1



```
License-Text:
  Full license text
4. `Eccezioni`:
  Alcune licenze possono essere corrette con delle eccezioni che forniscono
  diritti aggiuntivi. Queste eccezioni sono disponibili nei sorgenti del
   kernel nella cartella::
 LICENSES/exceptions/
  I file in questa cartella contengono il testo completo dell'eccezione e i
   `Metatag per le eccezioni` .
  Esempi::
  LICENSES/exceptions/Linux-syscall-note
   Contiene la descrizione dell'eccezione per le chiamate di sistema Linux
   così come documentato nel file COPYING del kernel Linux; questo viene usato
   per i file d'intestazione per la UAPI. Per esempio
   /\* SPDX-License-Identifier: GPL-2.0 WITH Linux-syscall-note \*/::
  LICENSES/exceptions/GCC-exception-2.0
   Contiene la 'eccezione di linking' che permette di collegare qualsiasi
  binario, indipendentemente dalla sua licenza, con un compilato il cui file
   sorgente è marchiato con questa eccezione. Questo è necessario per creare
   eseguibili dai sorgenti che non sono compatibili con la GPL.
   `Metatag per le eccezioni`:
  Un file contenente un'eccezione deve avere i seguenti metatag:
   - SPDX-Exception-Identifier:
 Un identificatore d'eccezione che possa essere usato in combinazione con
 un identificatore di licenza SPDX.
  - SPDX-URL:
 L'URL della pagina SPDX che contiene informazioni aggiuntive riguardanti
 l'eccezione.
  - SPDX-Licenses:
```



Una lista di licenze SPDX separate da virgola, che possono essere usate con l'eccezione.

- Usage-Guidance:

Testo in formato libero per dare suggerimenti agli utenti. Il testo deve includere degli esempi su come usare gli identificatori di licenza SPDX in un file sorgente in conformità con le linea guida in `Sintassi degli identificatori di licenza`.

- Exception-Text:

Tutto il testo che compare dopo questa etichetta viene trattato come se fosse parte del testo originale della licenza.

Esempi::

SPDX-Exception-Identifier: Linux-syscall-note
SPDX-URL: https://spdx.org/licenses/Linux-syscall-note.html

SPDX-Licenses: GPL-2.0, GPL-2.0+, GPL-1.0+, LGPL-2.0, LGPL-2.0+, LGPL-2.1, LGPL-2.1+

Usage-Guidance:

This exception is used together with one of the above SPDX-Licenses to mark user-space API (uapi) header files so they can be included into non GPL compliant user-space application code.

To use this exception add it with the keyword WITH to one of the identifiers in the SPDX-Licenses tag:

SPDX-License-Identifier: <SPDX-License> WITH Linux-syscall-note
Exception-Text:

Full exception text

::

SPDX-Exception-Identifier: GCC-exception-2.0

SPDX-URL: https://spdx.org/licenses/GCC-exception-2.0.html

SPDX-Licenses: GPL-2.0, GPL-2.0+

Usage-Guidance:

The "GCC Runtime Library exception 2.0" is used together with one of the above SPDX-Licenses for code imported from the GCC runtime library.

To use this exception add it with the keyword WITH to one of the identifiers in the SPDX-Licenses tag:

SPDX-License-Identifier: <SPDX-License> WITH GCC-exception-2.0

Exception-Text:

Full exception text

Per ogni identificatore di licenza SPDX e per le eccezioni dev'esserci un file



nella sotto-cartella LICENSES. Questo è necessario per permettere agli strumenti di effettuare verifiche (come checkpatch.pl), per avere le licenze disponibili per la lettura e per estrarre i diritti dai sorgenti, così come raccomandato da diverse organizzazioni FOSS, per esempio l'`iniziativa FSFE REUSE <a href="https://reuse.software/">https://reuse.software/</a>.

# \_`MODULE\_LICENSE`

I moduli del kernel necessitano di un'etichetta MODULE\_LICENSE(). Questa etichetta non sostituisce le informazioni sulla licenza del codice sorgente (SPDX-License-Identifier) né fornisce informazioni che esprimono o determinano l'esatta licenza sotto la quale viene rilasciato.

Il solo scopo di questa etichetta è quello di fornire sufficienti informazioni al caricatore di moduli del kernel, o agli strumenti in spazio utente, per capire se il modulo è libero o proprietario.

Le stringe di licenza valide per MODULE\_LICENSE() sono:

"GPL"	Il modulo è licenziato con la GPL versione 2.  Questo non fa distinzione fra GPL'2.0-only o  GPL-2.0-or-later. L'esatta licenza può essere  determinata solo leggendo i corrispondenti  file sorgenti.
"GPL v2"	Stesso significato di "GPL". Esiste per motivi storici.
"GPL and additional rights	guesta è una variante che esiste per motivi storici che indica che i sorgenti di un modulo sono rilasciati sotto una variante della licenza GPL v2 e quella MIT. Per favore non utilizzatela per codice nuovo.
"Dual MIT/GPL"	Questo è il modo corretto per esprimere il il fatto che il modulo è rilasciato con doppia licenza a scelta fra: una variante della GPL v2 o la licenza MIT.
"Dual BSD/GPL"	Questo modulo è rilasciato con doppia licenza a scelta fra: una variante della GPL v2 o la licenza BSD. La variante esatta della licenza

BSD può essere determinata solo attraverso i

corrispondenti file sorgenti.



"Dual MPL/GPL"

Questo modulo è rilasciato con doppia licenza a scelta fra: una variante della GPL v2 o la Mozilla Public License (MPL). La variante esatta della licenza MPL può essere determinata solo attraverso i corrispondenti file sorgenti.

"Proprietary"

Questo modulo è rilasciato con licenza

proprietaria. Questa stringa è solo per i moduli proprietari di terze parti e non può essere usata per quelli che risiedono nei sorgenti del kernel. I moduli etichettati in questo modo stanno contaminando il kernel e gli viene assegnato un flag 'P'; quando vengono caricati, il caricatore di moduli del kernel si rifiuterà di collegare questi moduli ai simboli che sono stati esportati con EXPORT\_SYMBOL\_GPL().

\_\_\_\_\_\_

### /tools/usb/usbip/COPYING:

## See **GPL-2.0** in the **Standard OSS License Text** appendix to this document.

#### /Documentation/COPYING-logo:

This is the full-colour version of the currently unofficial Linux logo ("currently unofficial" just means that there has been no paperwork and that I have not really announced it yet). It was created by Larry Ewing, and is freely usable as long as you acknowledge Larry as the original artist.

Note that there are black-and-white versions of this available that scale down to smaller sizes and are better for letterheads or whatever you want to use it for: for the full range of logos take a look at Larry's web-page:

https://www.isc.tamu.edu/~lewing/linux/

## /drivers/atm/nicstarmac.copyright:

```
/* nicstar.c v0.22 Jawaid Bazyar (bazyar@hypermall.com)

* nicstar.c, M. Welsh (matt.welsh@cl.cam.ac.uk)

* Hacked October, 1997 by Jawaid Bazyar, Interlink Advertising Services Inc.

* http://www.hypermall.com/

* 10/1/97 - commented out CFG_PHYIE bit - we don't care when the PHY

* interrupts us (except possibly for removal/insertion of the cable?)

* 10/4/97 - began heavy inline documentation of the code. Corrected typos

* and spelling mistakes.

* 10/5/97 - added code to handle PHY interrupts, disable PHY on

* loss of link, and correctly re-enable PHY when link is

* re-established. (put back CFG_PHYIE)

* Modified to work with the IDT7721 nicstar -- AAL5 (tested) only.

* R. D. Rechenmacher <ron@fnal.gov>, Aug. 6, 1997
```



```
* Linux driver for the IDT77201 NICSTAR PCI ATM controller.
* PHY component is expected to be 155 Mbps S/UNI-Lite or IDT 77155;
* see init nicstar() for PHY initialization to change this. This driver
* expects the Linux ATM stack to support scatter-gather lists
* (skb->atm.iovcnt != 0) for Rx skb's passed to vcc->push.
* Implementing minimal-copy of received data:
   IDT always receives data into a small buffer, then large buffers
     as needed. This means that data must always be copied to create
     the linear buffer needed by most non-ATM protocol stacks (e.g. IP)
     Fix is simple: make large buffers large enough to hold entire
     SDU, and leave <small buffer data> bytes empty at the start. Then
     copy small buffer contents to head of large buffer.
   Trick is to avoid fragmenting Linux, due to need for a lot of large
     buffers. This is done by 2 things:
       1) skb->destructor / skb->atm.recycle buffer
            combined, allow nicstar free rx skb to be called to
             recycle large data buffers
       2) skb clone of received buffers
   See nicstar free rx skb and linearize buffer for implementation
     details.
* Copyright (c) 1996 University of Cambridge Computer Laboratory
   This program is free software; you can redistribute it and/or modify
   it under the terms of the GNU General Public License as published by
   the Free Software Foundation; either version 2 of the License, or
   (at your option) any later version.
   This program is distributed in the hope that it will be useful,
   but WITHOUT ANY WARRANTY; without even the implied warranty of
   MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
   GNU General Public License for more details.
   You should have received a copy of the GNU General Public License
   along with this program; if not, write to the Free Software
   Foundation, Inc., 675 Mass Ave, Cambridge, MA 02139, USA.
* M. Welsh, 6 July 1996
```

Note: the following notices appear in files included in the /net/netfilter/ directory: SPDX-License-Identifier: GPL-2.0-only



```
Rusty Russell (C) 2000 -- This code is GPL.
Patrick McHardy (C) 2006-2012
(C) 2000-2001 Svenning Soerensen svenning@post5.tele.dk
Copyright (c) 2011 Patrick McHardy kaber@trash.net
Copyright (C) 2000-2005 Netfilter Core Team coreteam@netfilter.org
Copyright (c) 2006-2010 Patrick McHardy kaber@trash.net
(C) 2001 Marc Boucher (marc@mbsi.ca).
(C) 2006-2012 Patrick McHardy kaber@trash.net
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(C) 2006-2012 Patrick McHardy kaber@trash.net
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(C) 2002-2006 by Harald Welte laforge@gnumonks.org
(C) 2003 by Patrick Mchardy kaber@trash.net
(C) 2002-2006 Netfilter Core Team coreteam@netfilter.org
(C) 2003,2004 USAGI/WIDE Project http://www.linux-ipv6.org
(C) 2005-2012 Patrick McHardy kaber@trash.net
(C) 2002-2006 Netfilter Core Team coreteam@netfilter.org
Copyright (c) 2011 Patrick McHardy kaber@trash.net
(C) 2002-2013 Jozsef Kadlecsik kadlec@netfilter.org
(C) 2006-2012 Patrick McHardy kaber@trash.net
Copyright (c) 2003 Patrick McHardy, kaber@trash.net
```

(C) 2003,2004 USAGI/WIDE Project http://www.linux-ipv6.org



- (C) 2005-2012 Patrick McHardy kaber@trash.net
- (C) 2003-2004 by Harald Welte laforge@netfilter.org
- (C) 2006-2012 Patrick McHardy kaber@trash.net
- (C) 2003,2004 USAGI/WIDE Project http://www.linux-ipv6.org
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- (C) 2007-2012 Patrick McHardy kaber@trash.net
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- (C) 2007 Laszlo Attila Toth panther@balabit.hu
- Copyright (c) 2004, 2005 Patrick McHardy, kaber@trash.net
- Copyright (c) 2004-2012 Patrick McHardy kaber@trash.net
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- (C) 2007 by Patrick McHardy kaber@trash.net
- (C) 2005 Harald Welte laforge@gnumonks.org
- (C) 2005 Patrick McHardy kaber@trash.net
- (C) 2005-2006 Netfilter Core Team coreteam@netfilter.org
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- Copyright (c) 2005, 2006, 2008 Patrick McHardy kaber@trash.net
- Copyright (c) 2005-2007 Patrick McHardy  $\frac{\text{kaber@trash.net}}{\text{memory}}$
- Copyright (c) 2006 Jing Min Zhao zhaojingmin@users.sourceforge.net
- Copyright (c) 2006-2012 Patrick McHardy kaber@trash.net
- Copyright (c) 2006 Patrick McHardy kaber@trash.net
- (C) 2006 by Patrick McHardy kaber@trash.net
- Copyright (c) 2006-2010 Patrick McHardy kaber@trash.net
- (C) 2006-2012 Patrick McHardy  $\underline{\text{kaber@trash.net}}$
- Copyright (C) 2006-2012 Patrick McHardy <kaber@trash.net>
  Based on existing ip\_tables code which is
  Copyright (C) 1999 Paul `Rusty' Russell & Michael J. Neuling
- (C) 2006-2012 Patrick McHardy <kaber@trash.net> Based on the old ipv4-only ipt ULOG.c:



- (C) 2000-2004 by Harald Welte laforge@netfilter.org
- (C) 2007 Patrick McHardy kaber@trash.net

Copyright (c) 2007 Patrick McHardy kaber@trash.net

- (C) 2007 United Security Providers
- (C) 2007, 2008 Patrick McHardy kaber@trash.net
- (C) 2007 United Security Providers
- (C) 2007, 2008, 2011, 2012 Patrick McHardy kaber@trash.net

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#### MeCab

Project homepage/download site: <a href="https://taku910.github.io/mecab/">https://taku910.github.io/mecab/</a>

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In 1995, Guido continued his work on Python at the Corporation for National Research Initiatives (CNRI, see <a href="http://www.cnri.reston.va.us">http://www.cnri.reston.va.us</a>) in Reston, Virginia where he released several versions of the software.

In May 2000, Guido and the Python core development team moved to BeOpen.com to form the BeOpen PythonLabs team. In October of the same year, the PythonLabs team moved to Digital Creations (now Zope Corporation, see http://www.zope.com). In 2001, the Python Software Foundation (PSF, see http://www.python.org/psf/) was formed, a non-profit organization created specifically to own Python-related Intellectual Property. Zope Corporation is a sponsoring member of the PSF.

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	from			compatible? (1)
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1.3 thru 1.5.2	1.2	1995-1999	CNRI	yes
1.6	1.5.2	2000	CNRI	no
2.0	1.6	2000	BeOpen.com	no
1.6.1	1.6	2001	CNRI	yes (2)
2.1	2.0+1.6.1	2001	PSF	no
2.0.1	2.0+1.6.1	2001	PSF	yes
2.1.1	2.1+2.0.1	2001	PSF	yes
2.2	2.1.1	2001	PSF	yes
2.1.2	2.1.1	2002	PSF	yes
2.1.3	2.1.2	2002	PSF	yes
2.2.1	2.2	2002	PSF	yes
2.2.2	2.2.1	2002	PSF	yes
2.2.3	2.2.2	2003	PSF	yes
2.3	2.2.2	2002-2003	PSF	yes
2.3.1	2.3	2002-2003	PSF	yes
2.3.2	2.3.1	2002-2003	PSF	yes
2.3.3	2.3.2	2002-2003	PSF	yes
2.3.4	2.3.3	2004	PSF	yes
2.3.5	2.3.4	2005	PSF	yes
2.4	2.3	2004	PSF	yes
2.4.1	2.4	2005	PSF	yes
2.4.2	2.4.1	2005	PSF	yes
2.4.3	2.4.2	2006	PSF	yes
2.4.4	2.4.3	2006	PSF	yes
2.5	2.4	2006	PSF	yes
2.5.1	2.5	2007	PSF	yes
2.5.2	2.5.1	2008	PSF	yes
2.5.3	2.5.2	2008	PSF	yes
2.6	2.5	2008	PSF	yes
2.6.1	2.6	2008	PSF	yes
2.6.2	2.6.1	2009	PSF	yes
2.6.3	2.6.2	2009	PSF	yes
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	1.3 thru 1.5.2		1995-1999		yes
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	2.0	1.6	2000	BeOpen.com	no
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	2.1	2.0+1.6.1	2001	PSF	no
		2.0+1.6.1		PSF	yes
		2.1+2.0.1	2001	PSF	yes
		2.1.1	2001	PSF	yes
	2.1.2		2002	PSF	yes
	2.1.3		2002	PSF	yes
		2.2	2002	PSF	yes
		2.2.1	2002	PSF	yes
		2.2.2	2002-2003	PSF	yes
		2.2.2	2002-2003	PSF	yes
ا د			2002-2003	PSF	yes
	2.3.2	2.3.1	2003	PSF	yes
,   	2.3.3	2.3.2	2003	PSF	yes
	2.3.4	2.3.3	2004	PSF	yes
		2.3.4	2005		yes
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	2.4.3		2006	•	yes
	2.4.4	'	2006	PSF	yes
i		2.4	2006	PSF	yes
İ		2.5	2007		yes
İ		2.5.1	2008		yes
İ	2.5.3		2008	PSF	yes
	2.6	2.5		PSF	yes
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İ	2.6.2		2009		yes
			2009	•	yes
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#### Mersenne Twister

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A C-program for MT19937, with initialization improved 2002/1/26. Coded by Takuji Nishimura and Makoto Matsumoto.

Before using, initialize the state by using init\_genrand(seed) or init by array(init key, key length).

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Sockets

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module :mod:`socket` uses the functions, :func: `getaddrinfo`, :func:`getnameinfo`, which are coded in separate source files from the WIDE Project, http://www.wide.ad.jp/. ::

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MD5 message digest algorithm

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Independent implementation of MD5 (RFC 1321).

This code implements the MD5 Algorithm defined in RFC 1321, whose text is available at http://www.ietf.org/rfc/rfc1321.txt

The code is derived from the text of the RFC, including the test suite (section A.5) but excluding the rest of Appendix A. It does not include any code or documentation that is identified in the RFC as being copyrighted.

The original and principal author of md5.h is L. Peter Deutsch <ghost@aladdin.com>. Other authors are noted in the change history that follows (in reverse chronological order):

2002-04-13 lpd Removed support for non-ANSI compilers; removed references to Ghostscript; clarified derivation from RFC 1321; now handles byte order either statically or dynamically. 1999-11-04 lpd Edited comments slightly for automatic TOC extraction. 1999-10-18 lpd Fixed typo in header comment (ansi2knr rather than md5); added conditionalization for C++ compilation from Martin Purschke <purschke@bnl.gov>. 1999-05-03 lpd Original version.

Asynchronous socket services



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UUencode and UUdecode functions

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Modified by Jack Jansen, CWI, July 1995:

- Use binascii module to do the actual line-by-line conversion between ascii and binary. This results in a 1000-fold speedup. The C version is still 5 times faster, though.
- Arguments more compliant with Python standard



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# LGPL-2.0

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Version 2, June 1991

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[This is the first released version of the library GPL. It is numbered 2 because it goes with version 2 of the ordinary GPL.]

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This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

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Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6.

Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

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Version 3, 29 June 2007

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