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MA-E3xx for IoT

[Fluentd](#), fluent-logger-python 等を追加したファームウェアです。



Firmware

File	Stat	SHA1SUM	Info
mae3xx_trusty_IoT_v2_6_4.img	2015/10/21 11:25 90.0 MB	64129042baeffe97176fedf92e08712930e8f40d	v2.6.4
mae3xx_trusty_IoT_v2_6_5.img	2015/11/26 09:53 92.1 MB	6bd64e155375be80e690307db4e3f1d15a1a63be	v2.6.5 (compact3 JRE)
mae3xx_trusty_IoT_FullJRE_v2_6_5.img	2015/11/26 09:52 101.7 MB	b653b0ee750f401a1d1d62f13f7576c09dd723fc	v2.6.5 (Full JRE)
mae3xx_trusty_IoT_FullJRE_v2_6_8.img	2016/02/18 10:26 101.8 MB	3087cc0e70d6e588429fa36bae676c0614efa836	v2.6.8 (Full JRE)

α/β/RC

File	Stat	SHA1SUM	Info
mae3xx_trusty_iot_fulljre_v2_6_9rc3.img	2016/06/02 15:51 100.0 MB	91f333d899f92c11c295c7947de64d2faf78ec91	v2.6.9rc3 (FullJRE)
mae3xx_trusty_iot_v2_6_10rc1.img	2016/09/29 10:43 85.8 MB	650ac724244a97c793c69798a42bb1f40ebc48bf	v2.6.10rc1
mae3xx_trusty_iot_v2_6_10rc2.img	2016/10/19 17:51 85.8 MB	6d5a8c35b388bbf94db3bee7c847a0f286796289	v2.6.10rc2 AWS IoT対応版
mae3xx_trusty_iot_v2_7_0alpha4.img	2017/04/19 15:15 86.2 MB	ed9dfef50a05b6c575a9103ac7f7e43a9f934c27	v2.7.0α4
mae3xx_trusty_iot_v2_7_0alpha5.img	2017/04/20 16:22 86.2 MB	9a5275a4539b6d738f71f71c23f787e056dbee70	v2.7.0α5

ChangeLog

v2.6.4

- Package 追加
 - [Fluentd](#)

- [InfluxDB](#)
- [Redis](#) (redis-server, redis-tools)
- python3-redis
- Package(Fluentd Plugin) 追加
 - [fluent-plugin-named-pipe](#) ¹⁾
 - [fluent-plugin-secure-forward](#) ²⁾
- Package(Fluentd Plugin) 更新
 - fluent-plugin-secure-forward: require 順序による起動エラー修正
- Fluentd
 - Upstart init script 追加

v2.6.5

- Kernel 更新
 - v3.14.57
 - gpio-xioirq driver: RI/EMG_RI の割込をユーザーランドのプログラムで POLL できるように変更
- JRE 更新 (Oracle Java SE embedded 8)
 - [参考] [Oracleが定例パッチ公開DBやJavaなどの脆弱性を修正 \(ITmedia エンタープライズ\)](#)
 - [参考] [Oracle Java の脆弱性対策について\(CVE-2015-4835等\) \(IPA\)](#)
 - Full profile で JREcreate した JRE 版追加 ³⁾
- WebUI 更新
 - 誤記修正
 - 本装置設定情報：設定の復帰処理修正
- Package 更新
 - NTP ([USN-2783-1: NTP vulnerabilities - 27th October 2015](#))
 - unzip ([USN-2788-2: unzip regression - 9th November 2015](#))
 - InfluxDB (v0.9.5 正式リリースによる ⁴⁾)
 - Fluentd (0.12.17)
- Package 追加
 - python3-pytml
 - ruby-cause
 - ruby-influxdb
 - ruby-string-scrub
 - ruby-td-client ⁵⁾
- Package 追加 (MQTT 関連)
 - [mosquitto](#) (An Open Source MQTT v3.1/v3.1.1 Broker)
 - python3-paho-mqtt
 - python3-mosquitto
 - ruby-mqtt
- Package(Fluentd Plugin) 追加
 - [fluent-plugin-forest](#) ⁶⁾
 - [fluent-plugin-influxdb](#) ⁷⁾
 - fluent-plugin-rewrite-tag-filter
 - fluent-plugin-record-reformer
 - fluent-plugin-udp-stream
 - fluent-plugin-mqtt-io
 - fluent-plugin-record-modifier ⁸⁾

- fluent-plugin-stats ⁹⁾
- fluent-plugin-td ¹⁰⁾
- fluent-plugin-filter-record-map ¹¹⁾
- Fluentd
 - upstart init script 修正
 - sample config 追加

v2.6.8

- Ubuntu 14.04.4
- Kernel 更新
 - v3.14.61
- Package 追加
 - [python3-pylibmodbus](#) ¹²⁾ (Python wrapper for libmodbus)
 - dstat
 - [ruby-resolve-hostname](#) ¹³⁾
 - python3-yaml
 - ruby-safe-yaml
- Package(Fluentd Plugin/Mixin) 追加
 - fluent-mixin-rewrite-tag-name
 - fluent-plugin-dstat
 - fluent-plugin-notifier
- Package 更新
 - InfluxDB (v0.9.5.1 正式リリースによる ¹⁴⁾)
 - dpkg ([USN-2820-1: dpkg vulnerability - 26th November 2015](#))
 - libmodbus (3.1.2-1)
 - GnuTLS ([USN-2821-1: GnuTLS vulnerability - 30th November 2015](#))
 - OpenSSL ([USN-2830-1: OpenSSL vulnerabilities - 7th December 2015](#))
 - coreutils, ntp, python-apt-common, python3-apt, unattended-upgrades
 - ruby-influxdb (参考: [fluent-plugin-influxdb を利用する際の注意点 - Qiita](#))
 - libpng ([USN-2861-1: libpng vulnerabilities - 6th January 2016](#))
 - GnuTLS ([USN-2865-1: GnuTLS vulnerability - 8th January 2016](#))
 - OpenSSH ([USN-2869-1: OpenSSH vulnerabilities - 14th January 2016](#))
 - libxml2 ([USN-2875-1: libxml2 vulnerabilities - 19th January 2016](#))
 - curl ([USN-2882-1: curl vulnerability - 27th January 2016](#))
 - glibc ([USN-2900-1: GNU C Library vulnerability - 16th February 2016](#)) (参照: [glibc ライブラリに脆弱性 Linuxの大部分に深刻な影響 - ITmedia エンタープライズ](#))
- InfluxDB
 - config 更新 (DB容量, PATH設定など)
- JRE 更新
 - Java SE Embedded version 8 update 71 ([Oracle Java SE Embedded 8u71 Release Notes](#))
- WebUI 更新
 - フィルタ設定バリデーション変更
 - NTP設定バリデーション変更
 - データ取得中の設定ボタン無効

v2.6.9rc3

- Kernel 更新
 - v3.14.71
- Package 更新
 - apt-get により最新版へ
 - InfluxDB 0.13
- JRE 更新
 - Java SE Embedded version 8 update 91
- Software 追加
 - Thingworx WS-EMS

v2.6.10rc1

- v2.6.10 相当へ更新
- Kernel 更新
 - v3.14.79
- JRE 更新
 - Java SE Embedded version 8 update 101

v2.6.10rc2

- AWS IoT対応 (Fluentdプラグイン「Shadowライブラリ」)
- Package 更新
 - apt-get により最新版へ
 - ruby-mqtt 0.4.0

v2.7.0α4

- MA-E3xx firmware v2.7.0α4 相当へ更新
- Package 更新
 - ruby-fluent-plugin-mqtt-io 0.2.3-1
- JRE 更新
 - Java SE Embedded version 8 update 131

v2.7.0α5

- WebUI
 - MA-E3xx firmware v2.7.0α5 相当へ更新

Rootfs base

File	Stat	SHA1SUM	Info
MAE320_rootfsIoT_v2_6_4.tar.xz	2015/10/23 11:39 61.5 MB	c9c83028eaa73de3d23b7e6f68f9a8f7742e5a07	v2.6.4
MAE320_rootfsIoT_v2_6_5.tar.xz	2015/11/26 09:52 65.2 MB	fd53149b578181572096690b4a0326bdfd8a1f51	v2.6.5
MAE320_rootfsIoT_v2_6_8.tar.xz	2016/02/18 10:34 65.5 MB	1b4acc574f0f8e266b4d0f34d82b72a05cb212f8	v2.6.8

File	Stat	SHA1SUM	Info
MAE320_rootfsIoT_v2_6_10rc1.tar.xz	2016/09/29 10:43 58.6 MB	55b332657d17bd7b02d8c6298b7dddbb3a84d1de	v2.6.10rc1
MAE320_rootfsIoT_v2_6_10rc2.tar.xz	2016/10/19 18:32 57.9 MB	840246827913F47F0DB5AF19DD4E8A082F607D15	v2.6.10rc2

Packages List

Ubuntu Packages

v2.7.0α4 でのインストール済みパッケージ情報です。

```
Desired=Unknown/Install/Remove/Purge/Hold
| Status=Not/Inst/Conf-files/Unpacked/halF-conf/Half-inst/trig-aWait/Trig-
pend
|/ Err?=(none)/Reinst-required (Status,Err: uppercase=bad)
||/ Name Version
Architecture Description
+++-----
-----
=====
=====
=====
=====
=====
=====
ii adduser 3.113+nmu3ubuntu3
all add and remove users and groups
ii apcupsd 3.14.12-1-MAE3xx
armhf APC UPS Power Management (daemon)
ii apparmor 2.10.95-0ubuntu2.6~14.04.1
armhf user-space parser utility for AppArmor
ii apt 1.0.1ubuntu2.17
```

```
armhf      commandline package manager
ii apt-utils      1.0.1ubuntu2.17
armhf      package management related utility programs
ii armsd        1.0.7
armhf      ARMS protocol daemon.
ii at           3.1.14-1ubuntu1
armhf      Delayed job execution and batch processing
ii aufs-tools   1:3.2+20130722-1.1
armhf      Tools to manage aufs filesystems
ii base-files   7.2ubuntu5.5
armhf      Debian base system miscellaneous files
ii base-passwd  3.5.33
armhf      Debian base system master password and group files
ii bash        4.3-7ubuntu1.5
armhf      GNU Bourne Again SHell
ii bash-completion 1:2.1-4ubuntu0.2
all        programmable completion for the bash shell
ii bc          1.06.95-8ubuntu1
armhf      GNU bc arbitrary precision calculator language
ii bcrelay     1.3.4+27+gddb30f8-1ubuntu1.1
armhf      Broadcast relay daemon
ii bluez       4.101-0ubuntu13.1
armhf      Bluetooth tools and daemons
ii bluez-hcidump 2.5-1
armhf      Analyses Bluetooth HCI packets
ii bridge-utils 1.5-6ubuntu2
armhf      Utilities for configuring the Linux Ethernet bridge
ii bsduutils    1:2.20.1-5.1ubuntu20.9
armhf      Basic utilities from 4.BSD-Lite
ii busybox     1:1.21.0-1ubuntu1
armhf      Tiny utilities for small and embedded systems
ii busybox-initramfs 1:1.21.0-1ubuntu1
armhf      Standalone shell setup for initramfs
ii bzip2       1.0.6-5
armhf      high-quality block-sorting file compressor - utilities
ii ca-certificates 20160104ubuntu0.14.04.1
all        Common CA certificates
ii conntrack   1:1.4.1-1ubuntu1
armhf      Program to modify the conntrack tables
ii coreutils   8.21-1ubuntu5.4
armhf      GNU core utilities
ii cpio        2.11+dfsg-1ubuntu1.2
armhf      GNU cpio -- a program to manage archives of files
ii cpufrequtils 008-1
armhf      utilities to deal with the cpufreq Linux kernel feature
ii crda        1.1.2-1ubuntu2
armhf      wireless Central Regulatory Domain Agent
ii cron        3.0pl1-124ubuntu2
armhf      process scheduling daemon
```



```

ii  curl                                7.35.0-1ubuntu2.10
armhf      command line tool for transferring data with URL syntax
ii  dash                                0.5.7-4ubuntu1
armhf      POSIX-compliant shell
ii  dbus                                1.6.18-0ubuntu4.5
armhf      simple interprocess messaging system (daemon and utilities)
hi  ddclient                            3.8.1-1ubuntu2
all        address updating utility for dynamic DNS services
ii  debconf                             1.5.51ubuntu2
all        Debian configuration management system
ii  debconf-i18n                        1.5.51ubuntu2
all        full internationalization support for debconf
ii  debianutils                         4.4
armhf      Miscellaneous utilities specific to Debian
ii  dh-python                           1.20140128-1ubuntu8.2
all        Debian helper tools for packaging Python libraries and
applications
ii  dhcpcd                             1:3.2.3-11+deb7u1build0.14.04.1
armhf      DHCP client for automatically configuring IPv4 networking
ii  diffutils                           1:3.3-1
armhf      File comparison utilities
ii  dmsetup                             2:1.02.77-6ubuntu2
armhf      Linux Kernel Device Mapper userspace library
ii  dnsmasq                             2.68-1ubuntu0.1
all        Small caching DNS proxy and DHCP/TFTP server
ii  dnsmasq-base                       2.68-1ubuntu0.1
armhf      Small caching DNS proxy and DHCP/TFTP server
ii  dosfstools                          3.0.26-1ubuntu0.1
armhf      utilities for making and checking MS-DOS FAT filesystems
ii  dpkg                                1.17.5ubuntu5.7
armhf      Debian package management system
ii  dstat                               0.7.2-3build1
all        versatile resource statistics tool
ii  e2fslibs:armhf                      1.42.9-3ubuntu1.3
armhf      ext2/ext3/ext4 file system libraries
ii  e2fsprogs                           1.42.9-3ubuntu1.3
armhf      ext2/ext3/ext4 file system utilities
ii  easy-rsa                            2.2.2-1
all        Simple shell based CA utility
ii  ebtables                            2.0.10.4-3ubuntu1
armhf      Ethernet bridge frame table administration
ii  eject                               2.1.5+deb1+cvs20081104-13.1ubuntu0.14.04.1 armhf      ejects CDs and
operates CD-Changers under Linux
ii  etherwake                           1.09-4
armhf      tool to send magic Wake-on-LAN packets
ii  ethtool                             1:3.13-1
armhf      display or change Ethernet device settings
ii  file                                1:5.14-2ubuntu3.3
armhf      Determines file type using "magic" numbers
ii  findutils                           4.4.2-7

```

```
armhf      utilities for finding files--find, xargs
ii  firewallld      0.3.7-1
all        dynamically managed firewall with support for network zones
ii  fuse-zip        0.2.13-0ubuntu2
armhf      ZIP archive mounter based on FUSE
ii  gcc-4.8-base:armhf      4.8.4-2ubuntu1~14.04.3
armhf      GCC, the GNU Compiler Collection (base package)
ii  gcc-4.9-base:armhf      4.9.3-0ubuntu4
armhf      GCC, the GNU Compiler Collection (base package)
ii  gdisk-noicu     0.8.8-1ubuntu0.1
armhf      GPT fdisk text-mode partitioning tool (without unicode support)
ii  gettext-base    0.18.3.1-1ubuntu3
armhf      GNU Internationalization utilities for the base system
ii  glib2.0         1.40.0-1ubuntu0.2
armhf      Introspection data for GLib, GObject, Gio and GModule
ii  gnupg           1.4.16-1ubuntu2.4
armhf      GNU privacy guard - a free PGP replacement
ii  gpgv            1.4.16-1ubuntu2.4
armhf      GNU privacy guard - signature verification tool
ii  gpsd            3.9-3
armhf      Global Positioning System - daemon
ii  grep            2.16-1
armhf      GNU grep, egrep and fgrep
ii  gzip            1.6-3ubuntu1
armhf      GNU compression utilities
ii  hdparm          9.43-1ubuntu3
armhf      tune hard disk parameters for high performance
ii  hexedit         1.2.13-1
armhf      view and edit files in hexadecimal or in ASCII
ii  hostapd         1:2.1-0ubuntu1.4
armhf      user space IEEE 802.11 AP and IEEE 802.1X/WPA/WPA2/EAP
Authenticator
ii  hostname        3.15ubuntu1
armhf      utility to set/show the host name or domain name
ii  ifupdown        0.7.47.2ubuntu4.4
armhf      high level tools to configure network interfaces
ii  init-system-helpers      1.14ubuntu1
all        helper tools for all init systems
hi  initramfs-tools      0.103ubuntu4
all        tools for generating an initramfs
hi  initramfs-tools-bin  0.103ubuntu4
armhf      binaries used by initramfs-tools
ii  initscripts      2.88dsf-41ubuntu6.3
armhf      scripts for initializing and shutting down the system
ii  insserv          1.14.0-5ubuntu2
armhf      boot sequence organizer using LSB init.d script dependency
information
ii  iperf            2.0.5-3
armhf      Internet Protocol bandwidth measuring tool
```

```

ii  iproute2                      3.12.0-2ubuntu1
armhf      networking and traffic control tools
ii  iptables                      1.4.21-1ubuntu1
armhf      administration tools for packet filtering and NAT
ii  iptstate                      2.2.5-1
armhf      top-like interface to your netfilter connection-tracking table
ii  iputils-ping                 3:20121221-4ubuntu1.1
armhf      Tools to test the reachability of network hosts
ii  ipython3                     1.2.1-2
all        enhanced interactive Python 3 shell
ii  iso-codes                    3.52-1
all        ISO language, territory, currency, script codes and their
translations
ii  iw                          3.4-1
armhf      tool for configuring Linux wireless devices
ii  keyboard-configuration       1.70ubuntu8
all        system-wide keyboard preferences
ii  keyutils                    1.5.6-1
armhf      Linux Key Management Utilities
ii  klibc-utils                 2.0.3-0ubuntu1.14.04.2
armhf      small utilities built with klibc for early boot
ii  kmod                        15-0ubuntu6
armhf      tools for managing Linux kernel modules
ii  knocker                     0.7.1-4
armhf      Simple and easy to use TCP security port scanner
ii  krb5-locales                1.12+dfsg-2ubuntu5.3
all        Internationalization support for MIT Kerberos
ii  less                        458-2
armhf      pager program similar to more
ii  libacl1:armhf               2.2.52-1
armhf      Access control list shared library
ii  libapparmor-perl            2.10.95-0ubuntu2.6~14.04.1
armhf      AppArmor library Perl bindings
ii  libapparmor1:armhf         2.10.95-0ubuntu2.6~14.04.1
armhf      changehat AppArmor library
ii  libapr1:armhf               1.5.0-1
armhf      Apache Portable Runtime Library
ii  libaprutil1:armhf           1.5.3-1
armhf      Apache Portable Runtime Utility Library
ii  libaprutil1-dbd-sqlite3:armhf 1.5.3-1
armhf      Apache Portable Runtime Utility Library - SQLite3 Driver
ii  libaprutil1-ldap:armhf      1.5.3-1
armhf      Apache Portable Runtime Utility Library - LDAP Driver
ii  libapt-inst1.5:armhf        1.0.1ubuntu2.17
armhf      deb package format runtime library
ii  libapt-pkg4.12:armhf        1.0.1ubuntu2.17
armhf      package management runtime library
ii  libarms                      5.41
armhf      SMFv2 ARMS protocol shared libraries
ii  libasn1-8-heimdal:armhf     1.6~git20131207+dfsg-1ubuntu1.1
armhf      Heimdal Kerberos - ASN.1 library

```

```

ii  libasprintf0c2:armhf          0.18.3.1-1ubuntu3
armhf      GNU library to use fprintf and friends in C++
ii  libattr1:armhf                1:2.4.47-1ubuntu1
armhf      Extended attribute shared library
ii  libaudit-common               1:2.3.2-2ubuntu1
all        Dynamic library for security auditing - common files
ii  libaudit1:armhf              1:2.3.2-2ubuntu1
armhf      Dynamic library for security auditing
ii  libblkid1:armhf              2.20.1-5.1ubuntu20.9
armhf      block device id library
ii  libbluetooth3:armhf          4.101-0ubuntu13.1
armhf      Library to use the BlueZ Linux Bluetooth stack
ii  libbsd0:armhf                0.6.0-2ubuntu1
armhf      utility functions from BSD systems - shared library
ii  libbz2-1.0:armhf             1.0.6-5
armhf      high-quality block-sorting file compressor library - runtime
ii  libc-ares2:armhf             1.10.0-2ubuntu0.1
armhf      asynchronous name resolver
ii  libc-bin                      2.19-0ubuntu6.11
armhf      Embedded GNU C Library: Binaries
ii  libc6:armhf                  2.19-0ubuntu6.11
armhf      Embedded GNU C Library: Shared libraries
ii  libcap2:armhf                1:2.24-0ubuntu2
armhf      support for getting/setting POSIX.1e capabilities
ii  libcgmanager0:armhf          0.24-0ubuntu7.5
armhf      Central cgroup manager daemon (client library)
ii  libck-connector0:armhf       0.4.5-3.1ubuntu2
armhf      ConsoleKit libraries
ii  libcomerr2:armhf             1.42.9-3ubuntu1.3
armhf      common error description library
ii  libcpufreq0                   008-1
armhf      shared library to deal with the cpufreq Linux kernel feature
ii  libcurl3:armhf               7.35.0-1ubuntu2.10
armhf      easy-to-use client-side URL transfer library (OpenSSL flavour)
ii  libcurl3-gnutls:armhf        7.35.0-1ubuntu2.10
armhf      easy-to-use client-side URL transfer library (GnuTLS flavour)
ii  libdb5.1:armhf               5.1.29-7ubuntu1
armhf      Berkeley v5.1 Database Libraries [runtime]
ii  libdb5.3:armhf               5.3.28-3ubuntu3
armhf      Berkeley v5.3 Database Libraries [runtime]
ii  libdbus-1-3:armhf             1.6.18-0ubuntu4.5
armhf      simple interprocess messaging system (library)
ii  libdbus-glib-1-2:armhf        0.100.2-1
armhf      simple interprocess messaging system (GLib-based shared
library)
ii  libdebconfclient0:armhf       0.187ubuntu1
armhf      Debian Configuration Management System (C-implementation
library)
ii  libdevmapper1.02.1:armhf      2:1.02.77-6ubuntu2

```

```

armhf      Linux Kernel Device Mapper userspace library
ii libdrm2:armhf      2.4.67-1ubuntu0.14.04.1
armhf      Userspace interface to kernel DRM services -- runtime
ii libedit2:armhf     3.1-20130712-2
armhf      BSD editline and history libraries
ii libelf1:armhf      0.158-0ubuntu5.2
armhf      library to read and write ELF files
ii libencode-locale-perl 1.03-1
all        utility to determine the locale encoding
ii libestr0           0.1.9-0ubuntu2
armhf      Helper functions for handling strings (lib)
ii libevent-2.0-5:armhf 2.0.21-stable-1ubuntu1.14.04.2
armhf      Asynchronous event notification library
ii libexpat1:armhf     2.1.0-4ubuntu1.3
armhf      XML parsing C library - runtime library
ii libffi6:armhf      3.1~rc1+r3.0.13-12ubuntu0.1
armhf      Foreign Function Interface library runtime
ii libfile-listing-perl 6.04-1
all        module to parse directory listings
ii libfribidi0:armhf   0.19.6-1
armhf      Free Implementation of the Unicode BiDi algorithm
ii libfuse2:armhf      2.9.2-4ubuntu4.14.04.1
armhf      Filesystem in Userspace (library)
ii libgcc1:armhf       1:4.9.3-0ubuntu4
armhf      GCC support library
ii libgcrypt11:armhf   1.5.3-2ubuntu4.4
armhf      LGPL Crypto library - runtime library
ii libgdbm3:armhf      1.8.3-12build1
armhf      GNU dbm database routines (runtime version)
ii libgirepository-1.0-1 1.40.0-1ubuntu0.2
armhf      Library for handling GObject introspection data (runtime
library)
ii libglib2.0-0:armhf  2.40.2-0ubuntu1
armhf      GLib library of C routines
ii libglib2.0-data      2.40.2-0ubuntu1
all        Common files for GLib library
ii libgnutls-openssl27:armhf 2.12.23-12ubuntu2.7
armhf      GNU TLS library - OpenSSL wrapper
ii libgnutls26:armhf    2.12.23-12ubuntu2.7
armhf      GNU TLS library - runtime library
ii libgpg-error0:armhf  1.12-0.2ubuntu1
armhf      library for common error values and messages in GnuPG
components
ii libgps20:armhf       3.9-3
armhf      Global Positioning System - library
ii libgssapi-krb5-2:armhf 1.12+dfsg-2ubuntu5.3
armhf      MIT Kerberos runtime libraries - krb5 GSS-API Mechanism
ii libgssapi3-heimdal:armhf 1.6~git20131207+dfsg-1ubuntu1.1
armhf      Heimdal Kerberos - GSSAPI support library
ii libgssglue1:armhf    0.4-2ubuntu1
armhf      mechanism-switch gssapi library

```

```

ii  libhcrypto4-heimdal:armhf      1.6~git20131207+dfsg-lubuntu1.1
armhf      Heimdal Kerberos - crypto library
ii  libheimbase1-heimdal:armhf     1.6~git20131207+dfsg-lubuntu1.1
armhf      Heimdal Kerberos - Base library
ii  libheimntlm0-heimdal:armhf     1.6~git20131207+dfsg-lubuntu1.1
armhf      Heimdal Kerberos - NTLM support library
ii  libhtml-parser-perl            3.71-1build1
armhf      collection of modules that parse HTML text documents
ii  libhtml-tagset-perl            3.20-2
all        Data tables pertaining to HTML
ii  libhtml-tree-perl              5.03-1
all        Perl module to represent and create HTML syntax trees
ii  libhttp-cookies-perl           6.00-2
all        HTTP cookie jars
ii  libhttp-date-perl              6.02-1
all        module of date conversion routines
ii  libhttp-message-perl           6.06-1
all        perl interface to HTTP style messages
ii  libhttp-negotiate-perl         6.00-2
all        implementation of content negotiation
ii  libhx509-5-heimdal:armhf       1.6~git20131207+dfsg-lubuntu1.1
armhf      Heimdal Kerberos - X509 support library
ii  libidn11:armhf                 1.28-lubuntu2.1
armhf      GNU Libidn library, implementation of IETF IDN specifications
ii  libio-html-perl                1.00-1
all        open an HTML file with automatic charset detection
ii  libio-socket-ssl-perl          1.965-lubuntu1
all        Perl module implementing object oriented interface to SSL
sockets
ii  libjemalloc1                   3.5.1-2
armhf      general-purpose scalable concurrent malloc(3) implementation
ii  libjs-angularjs                1.2.11-1
all        lets you write client-side web applications as if you had a
smarter browser
ii  libjs-jquery                   1.7.2+dfsg-2ubuntu1
all        JavaScript library for dynamic web applications
ii  libjson-c2:armhf               0.11-3ubuntu1.2
armhf      JSON manipulation library - shared library
ii  libjson0:armhf                 0.11-3ubuntu1.2
armhf      JSON manipulation library (transitional package)
ii  libk5crypto3:armhf              1.12+dfsg-2ubuntu5.3
armhf      MIT Kerberos runtime libraries - Crypto Library
ii  libkeyutils1:armhf             1.5.6-1
armhf      Linux Key Management Utilities (library)
ii  libklibc                        2.0.3-0ubuntu1.14.04.2
armhf      minimal libc subset for use with initramfs
ii  libkmod2:armhf                 15-0ubuntu6
armhf      libkmod shared library
ii  libkrb5-26-heimdal:armhf       1.6~git20131207+dfsg-lubuntu1.1

```

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armhf      Heimdal Kerberos - libraries
ii libkrb5-3:armhf      1.12+dfsg-2ubuntu5.3
armhf      MIT Kerberos runtime libraries
ii libkrb5support0:armhf      1.12+dfsg-2ubuntu5.3
armhf      MIT Kerberos runtime libraries - Support library
ii libldap-2.4-2:armhf      2.4.31-1+nmu2ubuntu8.3
armhf      OpenLDAP libraries
ii liblocale-gettext-perl      1.05-7build3
armhf      module using libc functions for internationalization in Perl
ii liblockfile-bin      1.09-6ubuntu1
armhf      support binaries for and cli utilities based on liblockfile
ii liblockfile1:armhf      1.09-6ubuntu1
armhf      NFS-safe locking library
ii liblua5.1-common      2.0.2+dfsg-1
all        Just in time compiler for Lua - common files
ii liblwp-mediatypes-perl      6.02-1
all        module to guess media type for a file or a URL
ii liblwp-protocol-https-perl      6.04-2ubuntu0.1
all        HTTPS driver for LWP::UserAgent
ii liblzma5:armhf      5.1.1alpha+20120614-2ubuntu2
armhf      XZ-format compression library
ii liblzo2-2:armhf      2.06-1.2ubuntu1.1
armhf      data compression library
ii libmagic1:armhf      1:5.14-2ubuntu3.3
armhf      File type determination library using "magic" numbers
ii libmm14      1.4.2-5ubuntu3
armhf      Shared memory library - runtime
ii libmnl0:armhf      1.0.3-3ubuntu1
armhf      minimalistic Netlink communication library
ii libmodbus5:armhf      3.1.2-1
armhf      library for the Modbus protocol
ii libmosquitto1:armhf      1.4.11-0mosquitto2~trusty2
armhf      MQTT version 3.1/3.1.1 client library
ii libmount1:armhf      2.20.1-5.1ubuntu20.9
armhf      block device id library
ii libncurses5:armhf      5.9+20140118-1ubuntu1
armhf      shared libraries for terminal handling
ii libncursesw5:armhf      5.9+20140118-1ubuntu1
armhf      shared libraries for terminal handling (wide character support)
ii libnet-http-perl      6.06-1
all        module providing low-level HTTP connection client
ii libnet-ssleay-perl      1.58-1
armhf      Perl module for Secure Sockets Layer (SSL)
ii libnetfilter-conntrack3:armhf      1.0.4-1
armhf      Netfilter netlink-conntrack library
ii libnewt0.52:armhf      0.52.15-2ubuntu5
armhf      Not Erik's Windowing Toolkit - text mode windowing with slang
ii libnfnetwork0:armhf      1.0.1-2
armhf      Netfilter netlink library
ii libnfsidmap2:armhf      0.25-5
armhf      NFS idmapping library

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ii  libnih-dbus1:armhf          1.0.3-4ubuntu25
armhf      NIH D-Bus Bindings Library
ii  libnih1:armhf              1.0.3-4ubuntu25
armhf      NIH Utility Library
ii  libnl-3-200:armhf          3.2.21-1ubuntu4
armhf      library for dealing with netlink sockets
ii  libnl-genl-3-200:armhf      3.2.21-1ubuntu4
armhf      library for dealing with netlink sockets - generic netlink
ii  libopts25:armhf            1:5.18-2ubuntu2
armhf      automated option processing library based on autogen
ii  libp11-kit0:armhf           0.20.2-2ubuntu2
armhf      Library for loading and coordinating access to PKCS#11 modules
- runtime
ii  libpam-modules:armhf        1.1.8-1ubuntu2.2
armhf      Pluggable Authentication Modules for PAM
ii  libpam-modules-bin          1.1.8-1ubuntu2.2
armhf      Pluggable Authentication Modules for PAM - helper binaries
ii  libpam-runtime              1.1.8-1ubuntu2.2
all        Runtime support for the PAM library
ii  libpam0g:armhf              1.1.8-1ubuntu2.2
armhf      Pluggable Authentication Modules library
ii  libpcap0.8:armhf            1.5.3-2
armhf      system interface for user-level packet capture
ii  libpcre3:armhf              1:8.31-2ubuntu2.3
armhf      Perl 5 Compatible Regular Expression Library - runtime files
ii  libpcsclite1:armhf          1.8.10-1ubuntu1.1
armhf      Middleware to access a smart card using PC/SC (library)
ii  libpipeline1:armhf          1.3.0-1
armhf      pipeline manipulation library
ii  libpkcs11-helper1:armhf      1.11-1
armhf      library that simplifies the interaction with PKCS#11
ii  libplymouth2:armhf          0.8.8-0ubuntu17.1
armhf      graphical boot animation and logger - shared libraries
ii  libpng12-0:armhf            1.2.50-1ubuntu2.14.04.2
armhf      PNG library - runtime
ii  libpopt0:armhf              1.16-8ubuntu1
armhf      lib for parsing cmdline parameters
ii  libprocps0:armhf            1:3.3.3-2ubuntu9
armhf      library for accessing process information from /proc
ii  libprocps3:armhf            1:3.3.9-1ubuntu2.2
armhf      library for accessing process information from /proc
ii  libpython-stdlib:armhf       2.7.5-5ubuntu3
armhf      interactive high-level object-oriented language (default python
version)
ii  libpython2.7-minimal:armhf   2.7.6-8ubuntu0.3
armhf      Minimal subset of the Python language (version 2.7)
ii  libpython2.7-stdlib:armhf    2.7.6-8ubuntu0.3
armhf      Interactive high-level object-oriented language (standard
library, version 2.7)

```



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ii  libpython3-stdlib:armhf          3.4.0-0ubuntu2
armhf      interactive high-level object-oriented language (default
python3 version)
ii  libpython3.4-minimal:armhf        3.4.3-1ubuntu1~14.04.5
armhf      Minimal subset of the Python language (version 3.4)
ii  libpython3.4-stdlib:armhf         3.4.3-1ubuntu1~14.04.5
armhf      Interactive high-level object-oriented language (standard
library, version 3.4)
ii  libreadline5:armhf               5.2+dfsg-2
armhf      GNU readline and history libraries, run-time libraries
ii  libreadline6:armhf               6.3-4ubuntu2
armhf      GNU readline and history libraries, run-time libraries
ii  libroken18-heimdal:armhf          1.6~git20131207+dfsg-1ubuntu1.1
armhf      Heimdal Kerberos - roken support library
ii  librtmp0:armhf                   2.4+20121230.gitdf6c518-1
armhf      toolkit for RTMP streams (shared library)
ii  libruby1.9.1                     1.9.3.484-2ubuntu1.2
armhf      Libraries necessary to run Ruby 1.9.1
ii  libruby2.0:armhf                 2.0.0.484-1ubuntu2.2
armhf      Libraries necessary to run Ruby 2.0
ii  libsasl2-2:armhf                 2.1.25.dfsg1-17build1
armhf      Cyrus SASL - authentication abstraction library
ii  libsasl2-modules:armhf            2.1.25.dfsg1-17build1
armhf      Cyrus SASL - pluggable authentication modules
ii  libsasl2-modules-db:armhf          2.1.25.dfsg1-17build1
armhf      Cyrus SASL - pluggable authentication modules (DB)
ii  libselinux1:armhf                 2.2.2-1ubuntu0.1
armhf      SELinux runtime shared libraries
ii  libsemanage-common                2.2-1
all        Common files for SELinux policy management libraries
ii  libsemanage1:armhf                2.2-1
armhf      SELinux policy management library
ii  libsensors4:armhf                 1:3.3.4-2ubuntu1
armhf      library to read temperature/voltage/fan sensors
ii  libsepol1:armhf                   2.2-1ubuntu0.1
armhf      SELinux library for manipulating binary security policies
ii  libslang2:armhf                   2.2.4-15ubuntu1
armhf      S-Lang programming library - runtime version
ii  libsqlite3-0:armhf                3.8.2-1ubuntu2.1
armhf      SQLite 3 shared library
ii  libss2:armhf                      1.42.9-3ubuntu1.3
armhf      command-line interface parsing library
ii  libssl1.0.0:armhf                 1.0.1f-1ubuntu2.22
armhf      Secure Sockets Layer toolkit - shared libraries
ii  libstdc++6:armhf                  4.8.4-2ubuntu1~14.04.3
armhf      GNU Standard C++ Library v3
ii  libsystemd-login0:armhf            204-5ubuntu20.24
armhf      systemd login utility library
ii  libtasn1-3:armhf                  2.14-3ubuntu1
armhf      Manage ASN.1 structures (runtime)
ii  libtasn1-6:armhf                  3.4-3ubuntu0.4

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armhf      Manage ASN.1 structures (runtime)
ii libtext-charwidth-perl      0.04-7build3
armhf      get display widths of characters on the terminal
ii libtext-iconv-perl         1.7-5build2
armhf      converts between character sets in Perl
ii libtext-wrapil8n-perl      0.06-7
all        internationalized substitute of Text::Wrap
ii libtimedate-perl           2.3000-1
all        collection of modules to manipulate date/time information
ii libtinfo5:armhf            5.9+20140118-1ubuntu1
armhf      shared low-level terminfo library for terminal handling
ii libtirpc1:armhf            0.2.2-5ubuntu2
armhf      transport-independent RPC library
ii libudev1:armhf             204-5ubuntu20.24
armhf      libudev shared library
ii libuniconf4.6              4.6.1-7
armhf      C++ network libraries for rapid application development
ii liburi-perl                 1.60-1
all        module to manipulate and access URI strings
ii libusb-0.1-4:armhf         2:0.1.12-23.3ubuntu1
armhf      userspace USB programming library
ii libusb-1.0-0:armhf         2:1.0.17-1ubuntu2
armhf      userspace USB programming library
ii libustr-1.0-1:armhf        1.0.4-3ubuntu2
armhf      Micro string library: shared library
ii libuuid1:armhf             2.20.1-5.1ubuntu20.9
armhf      Universally Unique ID library
ii libwebsockets3:armhf       1.2.2-1
armhf      lightweight C websockets library
ii libwind0-heimdal:armhf     1.6~git20131207+dfsg-1ubuntu1.1
armhf      Heimdal Kerberos - stringprep implementation
ii libwrap0:armhf             7.6.q-25
armhf      Wietse Venema's TCP wrappers library
ii libwvstreams4.6-base       4.6.1-7
armhf      C++ network libraries for rapid application development
ii libwvstreams4.6-extras     4.6.1-7
armhf      C++ network libraries for rapid application development
ii libwww-perl                 6.05-2
all        simple and consistent interface to the world-wide web
ii libwww-robotrules-perl     6.01-1
all        database of robots.txt-derived permissions
ii libxml2:armhf              2.9.1+dfsg1-3ubuntu4.9
armhf      GNOME XML library
ii libxtables10                1.4.21-1ubuntu1
armhf      netfilter xtables library
ii libyaml-0-2:armhf          0.1.4-3ubuntu3.1
armhf      Fast YAML 1.1 parser and emitter library
ii libzip2                     0.10.1-1.2
armhf      library for reading, creating, and modifying zip archives
```

```

(runtime)
ii  lm-sensors                    1:3.3.4-2ubuntu1
armhf      utilities to read temperature/voltage/fan sensors
ii  localepurge                  0.7.3.2
all        reclaim disk space by removing unneeded localizations
ii  locales                      2.13+git20120306-12.1
all        common files for locale support
ii  lockfile-progs              0.1.17
armhf      Programs for locking and unlocking files and mailboxes
ii  login                      1:4.1.5.1-1ubuntu9.2
armhf      system login tools
ii  logrotate                   3.8.7-1ubuntu1
armhf      Log rotation utility
ii  lrzsz                      0.12.21-7
armhf      Tools for zmodem/xmodem/ymodem file transfer
ii  lsb-base                    4.1+Debian11ubuntu6.2
all        Linux Standard Base 4.1 init script functionality
ii  lsb-release                 4.1+Debian11ubuntu6.2
all        Linux Standard Base version reporting utility
ii  lsof                       4.86+dfsg-1ubuntu2
armhf      Utility to list open files
ii  ltrace                     0.7.3-4ubuntu5.1
armhf      Tracks runtime library calls in dynamically linked programs
ii  lua-apr:armhf              0.23.2.dfsg-2
armhf      Apache Portable Runtime library for the Lua language
ii  lua-bitop:armhf            1.0.2-2
armhf      fast bit manipulation library for the Lua language
ii  lua-cjson:armhf            2.1.0+dfsg-2
armhf      JSON parser/encoder for Lua
ii  lua-curl:armhf             0.3.0-7
armhf      libCURL bindings for the Lua language version 5.1
ii  lua-filessystem:armhf       1.6.2-1
armhf      luafilesystem library for the Lua language
ii  lua-posix:armhf            29-7ubuntu1
armhf      posix library for the Lua language
ii  lua-sec:armhf              0.5-1
armhf      SSL socket library for the Lua language
ii  lua-socket:armhf           3.0~rc1-3
armhf      TCP/UDP socket library for the Lua language
ii  lua-sql-sqlite3:armhf      2.3.0-3
armhf      luasql library for the Lua language
ii  luajit                     2.0.2+dfsg-1
armhf      Just in time compiler for Lua programming language version 5.1
ii  makedev                    2.3.1-93ubuntu2~ubuntu14.04.1
all        creates device files in /dev
ii  mawk                      1.3.3-17ubuntu2
armhf      a pattern scanning and text processing language
hi  mgetty                    1.1.36-2ubuntu1-MAE3xx
armhf      Smart Modem getty replacement
ii  mime-support                3.54ubuntu1.1
all        MIME files 'mime.types' & 'mailcap', and support programs

```

```
ii minicom 2.7-1
armhf friendly menu driven serial communication program
ii module-init-tools 15-0ubuntu6
all transitional dummy package (module-init-tools to kmod)
ii monit 1:5.6-2
armhf utility for monitoring and managing daemons or similar programs
ii mosquitto 1.4.11-0mosquitto2~trusty2
armhf MQTT version 3.1/3.1.1 compatible message broker
ii mosquitto-clients 1.4.11-0mosquitto2~trusty2
armhf Mosquitto command line MQTT clients
ii mount 2.20.1-5.1ubuntu20.9
armhf Tools for mounting and manipulating filesystems
ii mountall 2.53
armhf filesystem mounting tool
ii mtd-utils 1:1.5.0-1
armhf Memory Technology Device Utilities
ii multiarch-support 2.19-0ubuntu6.11
armhf Transitional package to ensure multiarch compatibility
ii nano 2.2.6-1ubuntu1
armhf small, friendly text editor inspired by Pico
ii ncurses-base 5.9+20140118-1ubuntu1
all basic terminal type definitions
ii ncurses-bin 5.9+20140118-1ubuntu1
armhf terminal-related programs and man pages
ii ncurses-term 5.9+20140118-1ubuntu1
all additional terminal type definitions
ii net-tools 1.60-25ubuntu2.1
armhf The NET-3 networking toolkit
ii netbase 5.2
all Basic TCP/IP networking system
ii netcat 1.10-40
all TCP/IP swiss army knife -- transitional package
ii netcat-openbsd 1.105-7ubuntu1
armhf TCP/IP swiss army knife
ii netcat-traditional 1.10-40
armhf TCP/IP swiss army knife
ii netstat-nat 1.4.10-2
armhf tool that display NAT connections
ii nfs-common 1:1.2.8-6ubuntu1.2
armhf NFS support files common to client and server
ii nginx-common 1.4.6-1ubuntu3.1-MAE3xx
all small, powerful, scalable web/proxy server - common files
ii nginx-light 1.4.6-1ubuntu3.1-MAE3xx
armhf nginx web/proxy server (basic version)
ii nkf 2.13-1
armhf Network Kanji code conversion Filter
ii ntp 1:4.2.6.p5+dfsg-3ubuntu2.14.04.10
armhf Network Time Protocol daemon and utility programs
hi ntpdate 1:4.2.6.p5+dfsg-3ubuntu2-MAE3xx
```

```

armhf      client for setting system time from NTP servers
ii  openresolv      3.5.2-1
all        management framework for resolv.conf
ii  openssh-client  1:6.6p1-2ubuntu2.8
armhf      secure shell (SSH) client, for secure access to remote machines
ii  openssh-server  1:6.6p1-2ubuntu2.8
armhf      secure shell (SSH) server, for secure access from remote
machines
ii  openssh-sftp-server  1:6.6p1-2ubuntu2.8
armhf      secure shell (SSH) sftp server module, for SFTP access from
remote machines
ii  openssl      1.0.1f-1ubuntu2.22
armhf      Secure Sockets Layer toolkit - cryptographic utility
ii  openvpn      2.3.2-7ubuntu3.1
armhf      virtual private network daemon
ii  passwd      1:4.1.5.1-1ubuntu9.2
armhf      change and administer password and group data
ii  perl        5.18.2-2ubuntu1.1
armhf      Larry Wall's Practical Extraction and Report Language
ii  perl-base    5.18.2-2ubuntu1.1
armhf      minimal Perl system
ii  perl-modules  5.18.2-2ubuntu1.1
all        Core Perl modules
ii  plymouth     0.8.8-0ubuntu17.1
armhf      graphical boot animation and logger - main package
ii  pm-utils     1.4.1-13ubuntu0.2
all        utilities and scripts for power management
ii  powermgmt-base  1.31build1
armhf      Common utils and configs for power management
ii  ppp          2.4.5-5.1ubuntu2.2
armhf      Point-to-Point Protocol (PPP) - daemon
ii  pppconfig    2.3.19ubuntu1
all        A text menu based utility for configuring ppp
ii  pppoeconf    1.20ubuntu1
all        configures PPPoE/ADSL connections
hi  pptp-linux    1.7.2-7-MAE3xx
armhf      Point-to-Point Tunneling Protocol (PPTP) Client
ii  pptpd        1.3.4+27+gddb30f8-1ubuntu1.1
armhf      PoPToP Point to Point Tunneling Server
ii  procs        1:3.3.9-1ubuntu2.2
armhf      /proc file system utilities
ii  psmisc       22.20-1ubuntu2
armhf      utilities that use the proc file system
ii  python       2.7.5-5ubuntu3
armhf      interactive high-level object-oriented language (default
version)
ii  python-apt-common  0.9.3.5ubuntu2
all        Python interface to libapt-pkg (locales)
ii  python-dbus  1.2.0-2build2
armhf      simple interprocess messaging system (Python interface)
ii  python-dbus-dev  1.2.0-2build2

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```
all          main loop integration development files for python-dbus
ii python-decorator          3.4.0-2build1
all          simplify usage of Python decorators by programmers
ii python-gi                 3.12.0-1ubuntu1
armhf        Python 2.x bindings for gobject-introspection libraries
ii python-minimal            2.7.5-5ubuntu3
armhf        minimal subset of the Python language (default version)
ii python-pymodbus           1.2.0-2
all          full Modbus protocol implementation
ii python-slip               0.4.0-1
all          miscellaneous convenience, extension and workaround code for
Python
ii python-slip-dbus          0.4.0-1
all          convenience functions for dbus services
ii python2.7                 2.7.6-8ubuntu0.3
armhf        Interactive high-level object-oriented language (version 2.7)
ii python2.7-minimal         2.7.6-8ubuntu0.3
armhf        Minimal subset of the Python language (version 2.7)
ii python3                   3.4.0-0ubuntu2
armhf        interactive high-level object-oriented language (default
python3 version)
ii python3-apt               0.9.3.5ubuntu2
armhf        Python 3 interface to libapt-pkg
ii python3-bottle            0.12.0-1
all          fast and simple WSGI-framework for Python3
ii python3-chardet           2.2.1-2~ubuntu1
all          universal character encoding detector for Python3
ii python3-dateutil          2.0+dfsg1-1
all          powerful extensions to the standard datetime module in Python 3
ii python3-dbus              1.2.0-2build2
armhf        simple interprocess messaging system (Python 3 interface)
ii python3-decorator          3.4.0-2build1
all          simplify usage of Python decorators by programmers
ii python3-fluent-logger     0.4.1~dev0-1
all          A Python logging handler for Fluentd event collector
ii python3-gi                3.12.0-1ubuntu1
armhf        Python 3 bindings for gobject-introspection libraries
ii python3-influxdb          2.9.2-1
all          InfluxDB client
ii python3-ipy               1:0.81-1
all          Python3 module for handling IPv4 and IPv6 addresses and
networks
ii python3-mako              0.9.1-1
all          fast and lightweight templating for the Python 3 platform
ii python3-markupsafe         0.18-1build2
armhf        HTML/XHTML/XML string library for Python 3
ii python3-minimal           3.4.0-0ubuntu2
armhf        minimal subset of the Python language (default python3 version)
ii python3-minimalmodbus     0.7-1
```

```

all      Easy-to-use Modbus RTU and Modbus ASCII implementation for P
ii python3-mosquitto      1.3.5-0ppa1
all      MQTT version 3.1 Python 3 client library
ii python3-msgpack        0.3.0-1ubuntu3
armhf     Python 3 implementation of MessagePack format
ii python3-netifaces      0.8-3build1
armhf     portable network interface information for Python 3
ii python3-openssl        0.13-2ubuntu6
armhf     Python 3 wrapper around the OpenSSL library
ii python3-paho-mqtt      1.1-1
all      MQTT version 3.1/3.1.1 client class
ii python3-pexpect        3.1-1ubuntu0.1
all      Python 3 module for automating interactive applications
ii python3-pkg-resources  3.3-1ubuntu2
all      Package Discovery and Resource Access using pkg_resources
ii python3-pycurl         7.19.3-0ubuntu3
armhf     Python 3 bindings to libcurl
ii python3-pylibmodbus    0.0.4-1
all      Python wrapper for libmodbus
ii python3-pytoml         0.1.7-1
all      A parser for TOML-0.4.0
ii python3-redis          2.10.3-1
all      Python client for Redis key-value store
ii python3-requests       2.2.1-1ubuntu0.3
all      elegant and simple HTTP library for Python3, built for human
beings
ii python3-serial         2.6-1build1
all      pyserial - module encapsulating access for the serial port
ii python3-setproctitle   1.1.8-1
armhf     A setproctitle implementation for Python (Python 3)
ii python3-simplegeneric  0.8.1-1
all      simple generic functions for Python3
ii python3-six            1.5.2-1ubuntu1
all      Python 2 and 3 compatibility library (Python 3 interface)
ii python3-software-properties 0.92.37.7
all      manage the repositories that you install software from
ii python3-tz             2012c-1ubuntu0.1
all      Python3 version of the Olson timezone database
ii python3-urllib3        1.7.1-1ubuntu4
all      HTTP library with thread-safe connection pooling for Python3
ii python3-yaml           3.10-4ubuntu0.1
armhf     YAML parser and emitter for Python3
ii python3.4              3.4.3-1ubuntu1~14.04.5
armhf     Interactive high-level object-oriented language (version 3.4)
ii python3.4-minimal      3.4.3-1ubuntu1~14.04.5
armhf     Minimal subset of the Python language (version 3.4)
ii readline-common        6.3-4ubuntu2
all      GNU readline and history libraries, common files
ii redis-server           2:2.8.4-2
armhf     Persistent key-value database with network interface
ii redis-tools            2:2.8.4-2

```

```

armhf      Persistent key-value database with network interface (client)
ii  rpcbind      0.2.1-2ubuntu2.2
armhf      converts RPC program numbers into universal addresses
ii  rsyslog      7.4.4-1ubuntu2.6
armhf      reliable system and kernel logging daemon
ii  ruby         1:1.9.3.4
all        Interpreter of object-oriented scripting language Ruby (default
version)
ii  ruby-cause   0.1-1
all        A backport of Exception#cause from Ruby 2.1.0
ii  ruby-cool.io 1.4.1-1
armhf      A cool framework for doing high performance I/O in Ruby
ii  ruby-fifo    1.0.0-1
all        Queueing library in Ruby built on top of Amazon SQS (Simple
Queue Service).
ii  ruby-fluent-mixin-config-placeholders 0.3.0-1
all        Configuration syntax extension mixin for fluentd plugin
ii  ruby-fluent-mixin-rewrite-tag-name    0.1.0-1
all        Fluentd mixin plugin to provides placeholder function for
rewriting tag for your any plugins as like fluent-plugin-rewrite-tag-filter.
It will let you get easy to implement tag placeholder for your own plugins.
ii  ruby-fluent-plugin-dstat              0.3.1-1
all        Dstat Input plugin for Fluent event collector
ii  ruby-fluent-plugin-filter-record-map  0.1.4-1
all        Filter Plugin to create a new record containing the values
converted by Ruby script.
ii  ruby-fluent-plugin-filter-typecast    0.0.2-1
all        A Fluentd filter plugin to cast record types
ii  ruby-fluent-plugin-flatten-hash       0.2.0-1
all        A fluentd plugin to flatten nested hash structure as a flat
record
ii  ruby-fluent-plugin-forest             0.3.0-1
all        plugin to create output plugin instances per tags dynamically
ii  ruby-fluent-plugin-influxdb          0.2.2-1
all        A buffered output plugin for fluentd and influxDB
ii  ruby-fluent-plugin-mqtt-io           0.2.3-1
all        fluentd input/output plugin for mqtt broker
ii  ruby-fluent-plugin-named-pipe        0.1.1-1
all        Named pipe input/output plugin for Fluentd
ii  ruby-fluent-plugin-notifier          0.2.4-1
all        check matched messages and emit alert message
ii  ruby-fluent-plugin-record-modifier    0.3.0-1
all        Output filter plugin for modifying each event record
ii  ruby-fluent-plugin-record-reformer    0.7.0-1
all        Fluentd plugin to add or replace fields of a event record
ii  ruby-fluent-plugin-rewrite-tag-filter 1.5.1-1
all        Fluentd Output filter plugin. It has designed to rewrite tag
like mod_rewrite. Re-emmit a record with rewritten tag when a value
matches/unmatches with the regular expression. Also you can change a tag

```


from apache log by domain, status-code(ex. 500 error), user-agent, request-uri, regex-backreference and so on with regular expression.

ii ruby-fluent-plugin-secure-forward 0.3.3dev2-1

all Fluentd input/output plugin to forward over SSL with authentications

ii ruby-fluent-plugin-stats 0.3.6-1

all Fluentd plugin to calculate statistics such as sum, max, min, avg

ii ruby-fluent-plugin-td 0.10.28-1

all Treasure Data Cloud Data Service plugin for Fluentd

ii ruby-fluent-plugin-typecast 0.2.0-1

all typecast output plugin for fluentd

ii ruby-fluent-plugin-udp-stream 0.0.2-1

all Plug-in to output to udp stream

ii ruby-fluentd 0.12.17-1

all Fluentd event collector

ii ruby-http-parser.rb 0.6.0-1

armhf Simple callback-based HTTP request/response parser

ii ruby-influxdb 0.2.3-1

all Ruby library for InfluxDB.

ii ruby-json 1.8.3-1

armhf JSON Implementation for Ruby

ii ruby-mkfifo 0.0.1-1

armhf

ii ruby-mqtt 0.4.0-1

all Implementation of the MQTT protocol

ii ruby-msgpack 0.5.12-1

armhf MessagePack, a binary-based efficient data interchange format.

ii ruby-resolve-hostname 0.0.4-1

all Hostname resolver with caching

ii ruby-safe-yaml 1.0.1-1

all safer YAML loader for Ruby

ii ruby-sigdump 0.2.3-1

all Setup signal handler which dumps backtrace of running threads and number of allocated objects per class. Require 'sigdump/setup', send SIGCONT, and see /tmp/sigdump-<pid>.log.

ii ruby-string-scrub 0.0.5-1

armhf String#scrub for Ruby 2.0.0 and 1.9.3

ii ruby-td-client 0.8.76-1

all Treasure Data API library for Ruby

ii ruby-thread-safe 0.3.5-1

all A collection of data structures and utilities to make thread-safe programming in Ruby easier

ii ruby-tzinfo 1.2.2-1

all Daylight savings aware timezone library

ii ruby-tzinfo-data 1.2015.7-1

all Timezone Data for TZInfo

ii ruby-uuidtools 2.1.5-1

all UUID generator

ii ruby-yajl 1.2.1-1

armhf Ruby C bindings to the excellent Yajl JSON stream-based parser

```
library.  
ii  ruby1.9.1                      1.9.3.484-2ubuntu1.2  
armhf      Interpreter of object-oriented scripting language Ruby  
ii  ruby2.0                        2.0.0.484-1ubuntu2.2  
armhf      Interpreter of object-oriented scripting language Ruby  
ii  rubygems-integration          1.5  
all        integration of Debian Ruby packages with Rubygems  
ii  screen                        4.1.0~20120320gitdb59704-9  
armhf      terminal multiplexer with VT100/ANSI terminal emulation  
ii  sed                           4.2.2-4ubuntu1  
armhf      The GNU sed stream editor  
ii  sensible-utils                0.0.9  
all        Utilities for sensible alternative selection  
ii  ser2net                       2.9.1-1  
armhf      Serial port to network proxy  
ii  sgml-base                     1.26+nmu4ubuntu1  
all        SGML infrastructure and SGML catalog file support  
ii  shared-mime-info              1.2-0ubuntu3  
armhf      FreeDesktop.org shared MIME database and spec  
ii  smstools                      3.1.15-1-MAE3xx-1  
armhf      SMS server tools for GSM modems  
ii  socat                         1.7.2.3-1  
armhf      multipurpose relay for bidirectional data transfer  
ii  software-properties-common    0.92.37.7  
all        manage the repositories that you install software from (common)  
ii  sqlite3                       3.8.2-1ubuntu2.1  
armhf      Command line interface for SQLite 3  
ii  squashfs-tools                1:4.2+20130409-2ubuntu0.14.04.1  
armhf      Tool to create and append to squashfs filesystems  
ii  ssmtp                          2.64-7  
armhf      extremely simple MTA to get mail off the system to a mail hub  
ii  stone                          2.3.e-2build1  
armhf      TCP/IP packet repeater in the application layer  
ii  strace                         4.8-1ubuntu5  
armhf      A system call tracer  
ii  sudo                           1.8.9p5-1ubuntu1.3  
armhf      Provide limited super user privileges to specific users  
ii  sysv-rc                       2.88dsf-41ubuntu6.3  
all        System-V-like runlevel change mechanism  
ii  sysvinit-utils                2.88dsf-41ubuntu6.3  
armhf      System-V-like utilities  
ii  tar                           1.27.1-1ubuntu0.1  
armhf      GNU version of the tar archiving utility  
ii  tcpd                           7.6.q-25  
armhf      Wietse Venema's TCP wrapper utilities  
ii  tcpdump                       4.9.0-1ubuntu1~ubuntu14.04.1  
armhf      command-line network traffic analyzer  
ii  tzdata                         2016j-0ubuntu0.14.04  
all        time zone and daylight-saving time data
```

```

ii  ubuntu-keyring                2012.05.19
all      GnuPG keys of the Ubuntu archive
ii  ucf                            3.0027+nmu1
all      Update Configuration File(s): preserve user changes to config
files
ii  udev                          204-5ubuntu20.24
armhf    /dev/ and hotplug management daemon
ii  unattended-upgrades          0.82.1ubuntu2.4
all      automatic installation of security upgrades
ii  unzip                        6.0-9ubuntu1.5
armhf    De-archiver for .zip files
ii  upstart                      1.12.1-0ubuntu4.2
armhf    event-based init daemon
ii  upstart-monitor              1.12.1-0ubuntu4.2
all      event monitor for upstart
ii  ureadahead                   0.100.0-16
armhf    Read required files in advance
ii  usb-modeswitch                2.1.1+repack0-1ubuntu1
armhf    mode switching tool for controlling "flip flop" USB devices
ii  usb-modeswitch-data          20140327-1
all      mode switching data for usb-modeswitch
ii  usbutils                     1:007-2ubuntu1.1
armhf    Linux USB utilities
ii  util-linux                   2.20.1-5.1ubuntu20.9
armhf    Miscellaneous system utilities
ii  vim-common                   2:7.4.052-1ubuntu3.1
armhf    Vi IMproved - Common files
ii  vim-tiny                     2:7.4.052-1ubuntu3.1
armhf    Vi IMproved - enhanced vi editor - compact version
ii  vlan                         1.9-3ubuntu10.1
armhf    user mode programs to enable VLANs on your ethernet devices
ii  watchdog                     5.13-1
armhf    system health checker and software/hardware watchdog handler
ii  wget                          1.15-1ubuntu1.14.04.2
armhf    retrieves files from the web
ii  whiptail                     0.52.15-2ubuntu5
armhf    Displays user-friendly dialog boxes from shell scripts
ii  wireless-regdb               2013.02.13-1ubuntu1
all      wireless regulatory database
ii  wpasupplicant                2.1-0ubuntu1.4
armhf    client support for WPA and WPA2 (IEEE 802.11i)
ii  wvdial                       1.61-4.1
armhf    intelligent Point-to-Point Protocol dialer
ii  xml-core                     0.13+nmu2
all      XML infrastructure and XML catalog file support
ii  xz-utils                     5.1.1alpha+20120614-2ubuntu2
armhf    XZ-format compression utilities
ii  zabbix-agent                 1:2.2.2+dfsg-1ubuntu1
armhf    network monitoring solution - agent
ii  zip                          3.0-8
armhf    Archiver for .zip files

```

```
ii  zlib1g:armhf 1:1.2.8.dfsg-1ubuntu1
armhf          compression library - runtime
ii  zram-config 0.1
all           Upstart job to enable zram support
```

Rubygems

v2.7.0α4 での gem list です。

```
cause (0.1)
cool.io (1.4.1)
fifo (1.0.0)
fluent-mixin-config-placeholders (0.3.0)
fluent-mixin-rewrite-tag-name (0.1.0)
fluent-plugin-dstat (0.3.1)
fluent-plugin-filter-record-map (0.1.4)
fluent-plugin-filter_typecast (0.0.2)
fluent-plugin-flatten-hash (0.2.0)
fluent-plugin-forest (0.3.0)
fluent-plugin-influxdb (0.2.2)
fluent-plugin-mqtt-io (0.2.3)
fluent-plugin-named_pipe (0.1.1)
fluent-plugin-notifier (0.2.4)
fluent-plugin-record-modifier (0.3.0)
fluent-plugin-record-reformer (0.7.0)
fluent-plugin-rewrite-tag-filter (1.5.1)
fluent-plugin-secure-forward (0.3.3dev2)
fluent-plugin-stats (0.3.6)
fluent-plugin-td (0.10.28)
fluent-plugin-typecast (0.2.0)
fluent-plugin-udp-stream (0.0.2)
fluentd (0.12.17)
http_parser.rb (0.6.0)
influxdb (0.2.3)
json (1.8.3)
mkfifo (0.0.1)
mqtt (0.4.0)
msgpack (0.5.12)
rdoc (3.9.4)
resolve-hostname (0.0.4)
safe_yaml (1.0.1)
sigdump (0.2.3)
string-scrub (0.0.5)
td-client (0.8.76)
thread_safe (0.3.5)
tzinfo (1.2.2)
```

```
tzinfo-data (1.2015.7)
uuidtools (2.1.5)
yajl-ruby (1.2.1)
```

Fluentd upstart log

```
2015-12-04 14:29:03 +0900 [info]: reading config file
path="/etc/fluent/fluent.conf"
2015-12-04 14:29:03 +0900 [info]: starting fluentd-0.12.17
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-mixin-config-placeholders'
version '0.3.0'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-mixin-rewrite-tag-name'
version '0.1.0'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-plugin-dstat' version '0.3.1'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-plugin-filter-record-map'
version '0.1.4'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-plugin-filter_typecast'
version '0.0.2'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-plugin-flatten-hash' version
'0.2.0'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-plugin-forest' version '0.3.0'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-plugin-influxdb' version
'0.2.2'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-plugin-mqtt-io' version
'0.0.4'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-plugin-named_pipe' version
'0.1.1'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-plugin-notifier' version
'0.2.4'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-plugin-record-modifier'
version '0.3.0'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-plugin-record-reformer'
version '0.7.0'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-plugin-rewrite-tag-filter'
version '1.5.1'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-plugin-secure-forward' version
'0.3.3dev2'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-plugin-stats' version '0.3.6'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-plugin-td' version '0.10.28'
2015-12-04 14:29:08 +0900 [info]: gem 'fluent-plugin-typecast' version
'0.2.0'
2015-12-04 14:29:09 +0900 [info]: gem 'fluent-plugin-udp-stream' version
'0.0.2'
2015-12-04 14:29:09 +0900 [info]: gem 'fluentd' version '0.12.17'
2015-12-04 14:29:09 +0900 [info]: adding match pattern="debug.*" type="file"
2015-12-04 14:29:09 +0900 [info]: adding match pattern="*"
type="udp_stream"
2015-12-04 14:29:09 +0900 [info]: adding source type="forward"
```

```
2015-12-04 14:29:09 +0900 [info]: using configuration file: <R00T>
<source>
  type forward
</source>
<match debug.*>
  type file
  path /tmp/fluent_debug.txt
  buffer_path /tmp/fluent_debug.txt.*
</match>
<match **>
  type udp_stream
  host 127.0.0.1
  port 23456
</match>
</R00T>
2015-12-04 14:29:09 +0900 [info]: listening fluent socket on 0.0.0.0:24224
```

Memo

Performance について

source に forward output に file 出力を設定し、fluent-logger-python によりデータを流し込んだ場合、1000msg/s 程度は処理できるようです。

1)

Named pipe input/output plugin for Fluentd.

2)

Fluentd input/output plugin to forward fluentd messages over SSL with authentication.

3)

参照: [Oracle Java SE Embedded: Developer's Guide - 7 About Compact Profiles](#)

4)

<https://github.com/influxdb/influxdb/releases/tag/v0.9.5>

5)

Treasure Data API library for Ruby

6)

plugin to create output plugin instances per tags dynamically

7)

A buffered output plugin for fluentd and influxDB

8)

Output filter plugin for modifying each event record

9)

Fluentd plugin to calculate statistics such as sum, max, min, avg

10)

Treasure Data Cloud Data Service plugin for Fluentd

11)

Filter Plugin to create a new record containing the values converted by Ruby script.

¹²⁾

ctypes による Native extension なのでminimalmodbus 比約 10 倍高速です

¹³⁾

fluent-plugin-secure-forward に必要

¹⁴⁾

<https://github.com/influxdb/influxdb/releases/tag/v0.9.5.1>

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