

Cactiが1.xにバージョン アップしているよ

ENOG46 Meeting

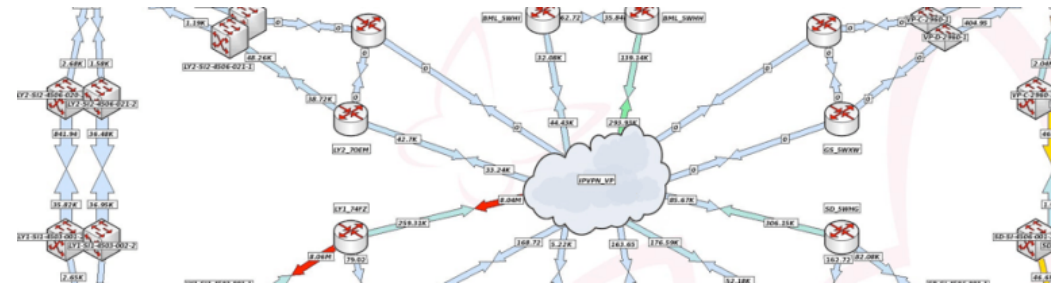
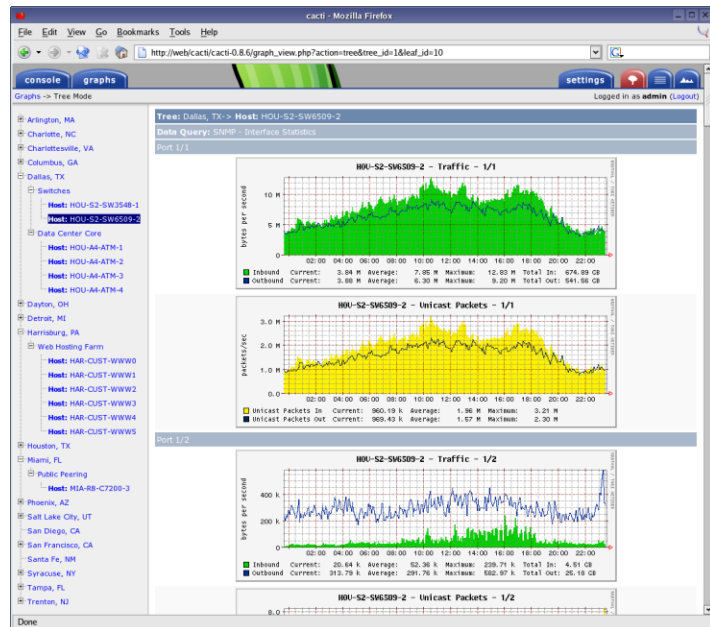
創風システム 外山 文規
toyama@sofu.co.jp

みなさん現役でCacti使ってます？



Cactiとは

- Webベースのネットワークモニターツール
- Pluginを導入することで機能拡張も可能



Cactiとは

便利なツールではあるけど、

- 古臭いデザイン
- 古い動作環境条件
- 新機能が追加されない

今となってはレガシーなツールという印象



1.0.0がリリースされていました

- 2017年1月30日にリリース
- ver 0.8.8hの次は1.0.0になっていた



どんどんバージョンが上がってます

- Cacti 1.0.0 2017月1月30日リリース
- Cacti 1.1.19 (2017年8月20日時点)
- 1.0.0 – 1.1.19までに25回リリース！

今日は1.1以降のバージョンを前提にお話しします



何が変わったのか

- 最新の安定版PHPやMySQLで動くように改修した
- Pluginで提供されていた機能を取り込んで新機能を増やした
 - ユーザアクセス権機能強化
 - セキュリティ機能強化
 - グラフ描画機能強化
 - 大規模運用、登録自動化の機能追加



Cacti 1.1.xの動作要件

- PHP5.4以降（5.5以上を推奨、7.0まではサポート）
- MySQL5.6(MariaDB10.0)以降
- MySQLの標準エンジンをInnoDBに
- MySQLの文字コードをutf8mb4に
- MySQLに対してタイムゾーン設定の必須
- MySQLの設定についてやや細かい要求
- RRDTool1.3以降（1.7は予備的なサポート）

Cacti 1.1.xの新しい機能

- いくつかのPluginがCactiのcoreに取り込まれ、それらが標準機能として追加されました

Aggregate Plugin	集計グラフの作成	RRDclean Plugin	RRD fileのクリーンアップと管理
AutoM8 Plugin	グラフ作成の自動化	Secpass Plugin	ユーザーパスワードポリシー強化
Boost Plugin	高速化等	Settings Plugin	プラグインの共有設定
CLog Plugin	Cactiのログ参照	SNMP Agent Plugin	Cacti用SNMPエージェント
Discovery Plugin	デバイスの検出	SpikeKill Plugin	グラフから不要なスパイクを削除
Domains Plugin	ADS/LDAPの拡張	SSL Plugin	httpsを強制するプラグイン
DSStats Plugin	新しいクラスのグラフタイプをサポート	SuperLinks Plugin	Cacti内に外部リンクを追加する
Logrotate Plugin	Cactiのログのローテート	UGroup Plugin	権限を持つグループの作成
Realtime Plugin	リアルタイムグラフ表示	Watermark Plugin	Cactiグラフにwatermarkを付ける
Reporting (Nectar) Plugin	Reporting		

Cacti 1.1.xの新しい機能

【管理画面表示関係】

- Cacti本体およびpluginの多言語対応
- 複数のテーマを追加

Classic, Modern, Dark, Paw, Paper-Plane, Sunrise

Cacti 1.1.xの新しい機能

【ユーザ、アクセス権関係】

- ロールベースアクセスコントロール
- ユーザ グループ パーミッションサポート
- ADS/LDAP拡張
- パスワードの複雑さの要求
- 自動ログアウト
- ログイン状態の保存

Cacti 1.1.xの新しい機能

【グラフ描画等】

- **Aggregate Graphs**

既存のグラフを1つの集計グラフに集約することができる

- **RRDTOOLのVDEFのサポート**

時系列のデータから、最大値や合計値、線の傾き、相関係数等の値を得ることができる

- **グラフ詳細画面でグラフのリアルタイム表示**

Cacti 1.1.xの新しい機能

【登録自動化、大規模運用】

- Remote data collectors

直接Cacti本体がネットワーク的に到達できない機器の監視に使用

- オートディスカバリー機能

ネットワーク上の特定の条件のデバイスの登録、データソースの登録、グラフ登録の自動化

- RRDtool Proxy Serverのサポート

- Sites

デバイス設置場所の情報の管理

Spine、Plugin、テンプレートについて

- PollerにSpineを使用している場合はSpineも最新版へ
- まだCacti1.0以降をサポートしていないPluginもある
- テンプレートは今までのものが基本使えるはずです

新規インストール

- PHPはPHP5.4以上をインストール
- PHPモジュールとして
posix,session,sockets,PDO,pdo_mysql,
xml,ldap,mbnstring,pcre,json,openssl,gd,zlibを合わせてインストール
- MySQL5.6(mariadb10.1)以上をインストール
- RRDtool、net-snmpもインストール

MySQLの設定 (my.cnf)

- cactiのインストーラに要求される条件満たす設定する

[mysqld]

datadir=/var/lib/mysql

socket=/var/lib/mysql/mysql.sock

symbolic-links=0

default-time-zone = 'Asia/Tokyo'

character-set-server=utf8mb4

collation-server = utf8mb4_unicode_ci

max_heap_table_size = 256M

max_allowed_packet = 16777216

tmp_table_size = 64M

join_buffer_size = 64M

innodb_file_per_table = ON

innodb_buffer_pool_size = 1024M

innodb_doublewrite = OFF

innodb_additional_mem_pool_size = 80M

innodb_flush_log_at_timeout = 3

innodb_read_io_threads = 32

innodb_write_io_threads = 16

innodb_large_prefix=ON

innodb_file_format=Barracuda

innodb_file_format_max=Barracuda

[mysqld_safe]

log-error=/var/log/mariadb/mariadb.log

pid-file=/var/run/mariadb/mariadb.pid

[client]

default-character-set=utf8mb4

!includedir /etc/my.cnf.d

※1.1.16時点

MySQLのtime zone 設定

- ・ **タイムゾーンデータのインポートと権限付与**

タイムゾーンデータのインポート

```
/usr/bin/mysql_tzinfo_to_sql /usr/share/zoneinfo > ./timezone
```

```
mysql -u root -p -Dmysql < ./timezone
```

cacti用のDatabaseユーザにタイムゾーンデータを参照できるようにする。

```
mysql -uroot -p
```

```
mysql> use mysql;
```

```
mysql> GRANT SELECT ON mysql.time_zone_name TO cactiuser@localhost;
```

```
mysql> flush privileges;
```

※別途 cacti用のDBとDB用のユーザの作成、初期sqlのインポートを行います。

インストール初期画面

Cacti Installation Wizard

License Agreement

Thanks for taking the time to download and install Cacti, the complete graphing solution for your network. Before you can start making cool graphs, there are a few pieces of data that Cacti needs to know.

Make sure you have read and followed the required steps needed to install Cacti before continuing. Install information can be found for [Unix](#) and [Win32](#)-based operating systems.

Also, if this is an upgrade, be sure to reading the [Upgrade](#) information file.

Cacti is licensed under the GNU General Public License, you must agree to its provisions before continuing:

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.

☐ Accept GPL License Agreement

Next

※1.1.16時点の画面です

インストール前のチェック

Cacti Installation Wizard

Pre-installation Checks

MySQL TimeZone Support

Your Cacti database account has access to the MySQL TimeZone database and that database is populated with global TimeZone information.

Required PHP Module Support

Cacti requires several PHP Modules to be installed to work properly. If any of these are not installed, you will be unable to continue the installation until corrected. In addition, for optimal system performance Cacti should be run with certain MySQL system variables set. Please follow the MySQL recommendations at your discretion. Always seek the MySQL documentation if you have any questions.

The following PHP extensions are mandatory, and MUST be installed before continuing your Cacti install.

Required PHP Modules

名前	Required	Installed
PHP Version	5.2.0+	5.4.16
posix	はい	はい
session	はい	はい
sockets	はい	はい
PDO	はい	はい
pdo_mysql	はい	はい
xml	はい	はい
ldap	はい	はい
mbstring	はい	はい
pcre	はい	はい
json	はい	はい
openssl	はい	はい
gd	はい	はい
zlib	はい	はい

※1.1.16時点の画面です

インストール前のチェック

Optional PHP Module Support

The following PHP extensions are recommended, and should be installed before continuing your Cacti install.

Optional Modules		
名前	Optional	Installed
snmp	はい	はい
gmp	はい	はい

These MySQL performance tuning settings will help your Cacti system perform better without issues for a longer time.

Recommended MySQL System Variable Settings			
MariaDB Tuning (/etc/my.cnf) - [Documentation] Note: Many changes below require a database restart			
Variable	Current Value	Recommended Value	Comments
version	10.1.24-MariaDB	>= 5.6	MySQL 5.6+ and MariaDB 10.0+ are great releases, and are very good versions to choose. Make sure you run the very latest release though which fixes a long standing low level networking issue that was causing spine many issues with reliability.
collation_server	utf8mb4_unicode_ci	utf8mb4_unicode_ci	When using Cacti with languages other than English, it is important to use the utf8mb4_unicode_ci collation type as some characters take more than a single byte.
character_set_client	utf8mb4	utf8mb4	When using Cacti with languages other than English, it is important to use the utf8mb4 character set as some characters take more than a single byte.
max_connections	151	>= 100	Depending on the number of logins and use of spine data collector, MariaDB will need many connections. The calculation for spine is: total_connections = total_processes * (total_threads + script_servers + 1), then you must leave headroom for user connections, which will change depending on the number of concurrent login accounts.

※1.1.16時点の画面です

インストール前のチェック

max_heap_table_size	256M	>=181M	If using the Cacti Performance Booster and choosing a memory storage engine, you have to be careful to flush your Performance Booster buffer before the system runs out of memory table space. This is done two ways, first reducing the size of your output column to just the right size. This column is in the tables poller_output, and poller_output_boost. The second thing you can do is allocate more memory to memory tables. We have arbitrarily chosen a recommended value of 10% of system memory, but if you are using SSD disk drives, or have a smaller system, you may ignore this recommendation or choose a different storage engine. You may see the expected consumption of the Performance Booster tables under Console -> System Utilities -> View Boost Status.
max_allowed_packet	16777216	>= 16777216	With Remote polling capabilities, large amounts of data will be synced from the main server to the remote pollers. Therefore, keep this value at or above 16M.
tmp_table_size	64M	>= 64M	When executing subqueries, having a larger temporary table size, keep those temporary tables in memory.
join_buffer_size	64M	>= 64M	When performing joins, if they are below this size, they will be kept in memory and never written to a temporary file.
innodb_file_per_table	ON	ON	When using InnoDB storage it is important to keep your table spaces separate. This makes managing the tables simpler for long time users of MariaDB. If you are running with this currently off, you can migrate to the per file storage by enabling the feature, and then running an alter statement on all InnoDB tables.

※1.1.16時点の画面です

インストール前のチェック

innodb_buffer_pool_size	1024M	>=907M	InnoDB will hold as much tables and indexes in system memory as is possible. Therefore, you should make the innodb_buffer_pool large enough to hold as much of the tables and index in memory. Checking the size of the /var/lib/mysql/cacti directory will help in determining this value. We are recommending 25% of your systems total memory, but your requirements will vary depending on your systems size.
innodb_doublewrite	OFF	OFF	With modern SSD type storage, this operation actually degrades the disk more rapidly and adds a 50% overhead on all write operations.
innodb_additional_mem_pool_size	80M	>= 80M	This is where metadata is stored. If you had a lot of tables, it would be useful to increase this.
innodb_lock_wait_timeout	50	>= 50	Rogue queries should not for the database to go offline to others. Kill these queries before they kill your system.
innodb_flush_log_at_timeout	3	>= 3	As of MariaDB 10.1.24, the you can control how often MariaDB flushes transactions to disk. The default is 1 second, but in high I/O systems setting to a value greater than 1 can allow disk I/O to be more sequential
innodb_read_io_threads	32	>= 32	With modern SSD type storage, having multiple read io threads is advantageous for applications with high io characteristics.
innodb_write_io_threads	16	>= 16	With modern SSD type storage, having multiple write io threads is advantageous for applications with high io characteristics.

※1.1.16時点の画面です

インストールタイプの選択

Cacti Installation Wizard

Installation Type

Please select the type of installation

Installation options:

- **New Primary Server** - Choose this for the Primary site.
- **New Remote Poller** - Remote Pollers are used to access networks that are not readily accessible to the Primary site.

New Primary Server ▾

The following information has been determined from Cacti's configuration file. If it is not correct, please edit "include/config.php" before continuing.

Local Cacti database connection information

Database: %s
Database User: **cactiuser**
Database Hostname: **localhost**
Port: **3306**
Server Operating System Type: **unix**

Previous

次に

※1.1.16時点の画面です

関連するパスやバージョンチェック

Cacti Installation Wizard

Critical Binary Locations and Versions

Make sure all of these values are correct before continuing.

RRDtool Binary Path: rrdtool バイナリへのパスです。
 ✓

PHP バイナリパス: The path to your PHP binary file (may require a php recompile to get this file).
 ✓

snmpwalk バイナリパス: snmpwalk バイナリへのパスです。
 ✓

snmpget バイナリパス: snmpget バイナリへのパスです。
 ✓

snmpbulkwalk Binary Path: The path to your snmpbulkwalk binary.
 ✓

snmpgetnext Binary Path: The path to your snmpgetnext binary.
 ✓

snmptrap Binary Path: The path to your snmptrap binary.
 ✓

Spine Binary File Location: The path to Spine binary.
 ✗

Cacti Log Path: The path to your Cacti log file.
 ✗

Theme: Please select one of the available Themes to skin your Cacti with.

RRDtool Version: The version of RRDtool that you have installed.

※1.1.16時点の画面です

書き込み権限のチェック

Cacti Installation Wizard

Directory Permission Checks

Please ensure the directory permissions below are correct before proceeding. During the install, these directories need to be owned by the Web Server user. These permission changes are required to allow the Installer to install Device Template packages which include XML and script files that will be placed in these directories. If you choose not to install the packages, there is an 'install_package.php' cli script that can be used from the command line after the install is complete.

After the install is complete, you can make some of these directories read only to increase security.

Required Writable at Install Time Only

/home/cactiuser/cacti-1.1.16/resource/snmp_queries is Writable

/home/cactiuser/cacti-1.1.16/resource/script_server is Writable

/home/cactiuser/cacti-1.1.16/resource/script_queries is Writable

/home/cactiuser/cacti-1.1.16/scripts is Writable

Required Writable after Install Complete

/home/cactiuser/cacti-1.1.16/log is Writable

/home/cactiuser/cacti-1.1.16/cache/boost is Writable

/home/cactiuser/cacti-1.1.16/cache/mibcache is Writable

/home/cactiuser/cacti-1.1.16/cache/realtime is Writable

/home/cactiuser/cacti-1.1.16/cache/spikekill is Writable

All folders are writable

NOTE: If you are installing packages, once the packages are installed, you should change the scripts directory back to read only as this presents some exposure to the web site.

Previous

Next

※1.1.16時点の画面です

使用する初期テンプレートの選択

Cacti Installation Wizard

Template Setup

Please select the Device Templates that you wish to use after the Install. If your Operating System is Windows, you need to ensure that you select the 'Windows Device' Template. If your Operating System is Linux/UNIX, make sure you select the 'Local Linux Machine' Device Template.

Device Templates allow you to monitor and graph a vast assortment of data within Cacti. After you select the desired Device Templates, press 'Finish' and the installation will complete. Please be patient on this step, as the importation of the Device Templates can take a few minutes.

Templates				
名前	説明	Author	Homepage	☐
Cisco Router	The Cisco Router Device Template	The Cacti Group	http://www.cacti.net	☐
Generic SNMP Device	The Generic SNMP Device Template	The Cacti Group	http://www.cacti.net	☐
Local Linux Machine	The Local Linux Device Template	The Cacti Group	http://www.cacti.net	☐
Net-SNMP Device	The Net-SNMP Device Template	The Cacti Group	http://www.cacti.net	☐
Windows Device	The Windows Device Template	The Cacti Group	http://www.cacti.net	☐

NOTE: Press 'Finish' to complete the installation process after selecting your Device Templates.

※1.1.16時点の画面です

ログイン画面



A screenshot of a web login page. The background is a solid dark green. In the center is a white rounded rectangle containing the login form. A green cactus icon is positioned at the top right of the white box. The form has the title 'User Login' in bold. It includes two input fields: one for 'ユーザー名' (Username) and one for 'パスワード' (Password) which is masked with asterisks. Below these is a checkbox labeled 'Keep me signed in'. At the bottom left of the form is a button labeled 'ログイン' (Login).

User Login

ユーザー名

パスワード

☐ Keep me signed in

Version 1.1.16 | (c) 2004-2017 - The Cacti Group

初期画面

コンソール グラフ Reporting Logs

コンソール

Logged in as admin

作成

Management

Data Collection

Templates

Automation

Presets

インポート/エクスポート

Configuration

設定

Users

User Groups

User Domains

Plugin Management

ユーティリティ

You are now logged into **Cacti**. You can follow these basic steps to get started.

- Create devices for network
- Create graphs for your new devices
- View your new graphs

Version 1.1.16



0.8.xからのアップグレード

- 0.8.x時代からあるアップグレード手順

1. DBをバックアップ
2. Cactiのプログラムを新しいバージョンに差し替え
3. DB設定やRRDのデータ等を新しいバージョンのディレクトリに配置
4. <http://example.com/cacti/> などでCactiにアクセスして、アップデートウィザードに従う

アップグレードプログラムも0.8.x -> 1.1.xのための処理も実装されている… が、

<https://www.cacti.net/downloads/docs/html/upgrade.html>

0.8.xからのアップグレード

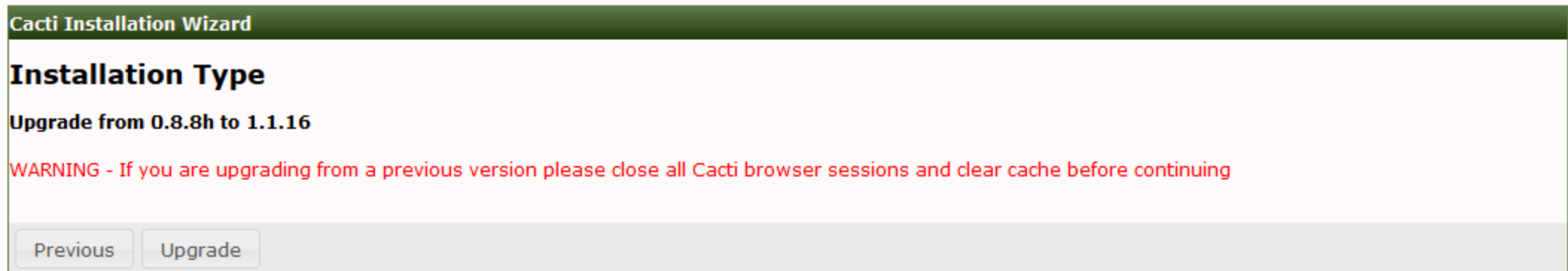
***現時点*ではお勧めしません**

(あくまで個人の感想です)



0.8.8xからのアップグレード

- ・アップデイトプログラムは対応している



0.8.8からのアップグレード

- 処理は全部[Success]で完了する

Disabling thold version 0.4.3 as it is not compatible with Cacti 1.1.16

Cacti Installation Wizard

Upgrade Results

Database upgrade completed!

Version: 1.0.0

[Success]

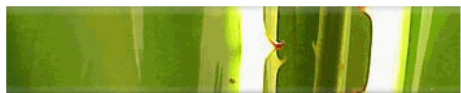
```
CREATE TABLE IF NOT EXISTS `user_auth_group` (  
  `id` int(10) unsigned NOT NULL auto_increment,  
  `name` varchar(20) NOT NULL,  
  `description` varchar(255) NOT NULL default "",  
  `graph_settings` varchar(2) DEFAULT NULL,  
  `login_opts` tinyint(1) NOT NULL DEFAULT '1',  
  `show_tree` varchar(2) DEFAULT 'on',  
  `show_list` varchar(2) DEFAULT 'on',  
  `show_preview` varchar(2) NOT NULL DEFAULT 'on',  
  `policy_graphs` tinyint(1) unsigned NOT NULL DEFAULT '1',  
  `policy_trees` tinyint(1) unsigned NOT NULL DEFAULT '1',  
  `policy_hosts` tinyint(1) unsigned NOT NULL DEFAULT '1',  
  `policy_graph_templates` tinyint(1) unsigned NOT NULL DEFAULT '1',  
  `enabled` char(2) NOT NULL DEFAULT 'on',  
  PRIMARY KEY (`id`))  
ENGINE=InnoDB  
COMMENT='Table that Contains User Groups';
```

[Success]

```
CREATE TABLE IF NOT EXISTS `user_auth_group_perms` (  
  `group_id` mediumint(8) unsigned NOT NULL DEFAULT '0',  
  `item_id` mediumint(8) unsigned NOT NULL DEFAULT '0',  
  `type` tinyint(2) unsigned NOT NULL DEFAULT '0',  
  PRIMARY KEY (`group_id`, `item_id`, `type`),  
  KEY `group_id` (`group_id`, `type`))  
ENGINE=InnoDB  
COMMENT='Table that Contains User Group Permissions';
```


0.8.8からのアップグレード

- ・ログインもできるし、ぱっと見問題なさそう



User Login

ユーザー名

パスワード

☐ Keep me signed in

Version 1.1.16 | (c) 2004-2017 - The Cacti Group

consolegraphsnectarclog

コンソール

Logged in as **admin**

作成

新規グラフ

Management

デバイス

Sites

Trees

グラフ

データソース

Aggregates

Data Collection

Data Collectors

データ問合せ

データの入力方法

Templates

デバイス

グラフ

データソース

Aggregate

色

Automation

Networks

Discovered Devices

Device Rules

Graph Rules

You are now logged into **Cacti**. You can follow these basic steps to get started.

- [Create devices](#) for network
- [Create graphs](#) for your new devices
- [View](#) your new graphs

Version 1.1.16

新規インストールのDBの状態（抜粋）

Summary	Database	PHP Info					
Technical Support [Database]							
MySQL Table Information - Sizes in KBytes							
名前	Engine	Rows	Avg Row Length	Data Length	Index Length	Collation	Comment
aggregate_graph_templates	InnoDB	1	16,384	16,384	32,768	utf8mb4_unicode_ci	Template Definitions for Aggregate Graphs
aggregate_graph_templates_graph	InnoDB	1	16,384	16,384	0	utf8mb4_unicode_ci	Aggregate Template Graph Data
aggregate_graph_templates_item	InnoDB	10	1,638	16,384	0	utf8mb4_unicode_ci	Aggregate Template Graph Items
aggregate_graphs	InnoDB	2	8,192	16,384	65,536	utf8mb4_unicode_ci	Aggregate Graph Definitions
aggregate_graphs_graph_item	InnoDB	20	819	16,384	0	utf8mb4_unicode_ci	Aggregate Graph Graph Items
aggregate_graphs_items	InnoDB	12	1,365	16,384	0	utf8mb4_unicode_ci	Aggregate Graph Items
automation_devices	InnoDB	0	0	16,384	32,768	utf8mb4_unicode_ci	Table of Discovered Devices
automation_graph_rule_items	InnoDB	6	2,730	16,384	0	utf8mb4_unicode_ci	Automation Graph Rule Items
automation_graph_rules	InnoDB	4	4,096	16,384	16,384	utf8mb4_unicode_ci	Automation Graph Rules
automation_ips	MEMORY	0	500	0	0	utf8mb4_unicode_ci	List of discoverable ip addresses used for scanning
automation_match_rule_items	InnoDB	7	2,340	16,384	0	utf8mb4_unicode_ci	Automation Match Rule Items
automation_networks	InnoDB	1	16,384	16,384	16,384	utf8mb4_unicode_ci	Stores scanning subnet definitions
automation_processes	MEMORY	0	268	0	0	utf8mb4_unicode_ci	Table tracking active poller processes
automation_snmp	InnoDB	1	16,384	16,384	0	utf8mb4_unicode_ci	Group of SNMP Option Sets
automation_snmp_items	InnoDB	2	8,192	16,384	0	utf8mb4_unicode_ci	Set of SNMP Options
automation_templates	InnoDB	2	8,192	16,384	0	utf8mb4_unicode_ci	Templates of SNMP Sys variables used for automation
automation_tree_rule_items	InnoDB	4	4,096	16,384	0	utf8mb4_unicode_ci	Automation Tree Rule Items
automation_tree_rules	InnoDB	2	8,192	16,384	16,384	utf8mb4_unicode_ci	Automation Tree Rules
cdef	InnoDB	11	1,489	16,384	32,768	utf8mb4_unicode_ci	
cdef_items	InnoDB	25	655	16,384	16,384	utf8mb4_unicode_ci	
color_template_items	InnoDB	44	372	16,384	0	utf8mb4_unicode_ci	Color Items for Color Templates
color_templates	InnoDB	4	4,096	16,384	0	utf8mb4_unicode_ci	Color Templates
colors	InnoDB	369	133	49,152	16,384	utf8mb4_unicode_ci	
data_input	InnoDB	14	1,170	16,384	16,384	utf8mb4_unicode_ci	
data_input_data	InnoDB	591	83	49,152	16,384	utf8mb4_unicode_ci	
data_input_fields	InnoDB	52	315	16,384	32,768	utf8mb4_unicode_ci	
data_local	InnoDB	37	442	16,384	65,536	utf8mb4_unicode_ci	
data_source_profiles	InnoDB	2	8,192	16,384	16,384	utf8mb4_unicode_ci	Stores Data Source Profiles
data_source_profiles_cf	InnoDB	8	2,048	16,384	16,384	utf8mb4_unicode_ci	Maps the Data Source Profile Consolidation Functions
data_source_profiles_rra	InnoDB	8	2,048	16,384	16,384	utf8mb4_unicode_ci	Stores RRA Definitions for Data Source Profiles
data_source_purge_action	InnoDB	0	0	16,384	16,384	utf8mb4_unicode_ci	RRD Cleaner File Actions
data_source_purge_temp	InnoDB	0	0	16,384	65,536	utf8mb4_unicode_ci	RRD Cleaner File Repository
data_source_stats_daily	InnoDB	71	230	16,384	0	utf8mb4_unicode_ci	

アップグレード後のDBの状態（抜粋）

SummaryDatabasePHP Info

Technical Support [Database]

MySQL Table Information - Sizes in KBytes

名前	Engine	Rows	Avg Row Length	Data Length	Index Length	Collation	Comment
aggregate_graph_templates	InnoDB	0	0	16,384	32,768	utf8mb4_unicode_ci	Template Definitions for Aggregate Graphs
aggregate_graph_templates_graph	InnoDB	0	0	16,384	0	utf8mb4_unicode_ci	Aggregate Template Graph Data
aggregate_graph_templates_item	InnoDB	0	0	16,384	0	utf8mb4_unicode_ci	Aggregate Template Graph Items
aggregate_graphs	InnoDB	0	0	16,384	65,536	utf8mb4_unicode_ci	Aggregate Graph Definitions
aggregate_graphs_graph_item	InnoDB	0	0	16,384	0	utf8mb4_unicode_ci	Aggregate Graph Graph Items
aggregate_graphs_items	InnoDB	0	0	16,384	0	utf8mb4_unicode_ci	Aggregate Graph Items
automation_devices	InnoDB	0	0	16,384	32,768	utf8mb4_unicode_ci	Table of Discovered Devices
automation_graph_rule_items	InnoDB	6	2,730	16,384	0	utf8mb4_unicode_ci	Automation Graph Rule Items
automation_graph_rules	InnoDB	3	5,461	16,384	16,384	utf8mb4_unicode_ci	Automation Graph Rules
automation_ips	MEMORY	0	1,100	0	0	utf8mb4_unicode_ci	List of discoverable ip addresses used for scanning
automation_match_rule_items	InnoDB	7	2,340	16,384	0	utf8mb4_unicode_ci	Automation Match Rule Items
automation_networks	InnoDB	0	0	16,384	16,384	utf8mb4_unicode_ci	Stores scanning subnet definitions
automation_processes	MEMORY	0	268	0	0	utf8mb4_unicode_ci	Table tracking active poller processes
automation_snmp	InnoDB	0	0	16,384	0	utf8mb4_unicode_ci	Group of SNMP Option Sets
automation_snmp_items	InnoDB	0	0	16,384	0	utf8mb4_unicode_ci	Set of SNMP Options
automation_templates	InnoDB	0	0	16,384	0	utf8mb4_unicode_ci	Templates of SNMP Sys variables used for automation
automation_tree_rule_items	InnoDB	4	4,096	16,384	0	utf8mb4_unicode_ci	Automation Tree Rule Items
automation_tree_rules	InnoDB	2	8,192	16,384	16,384	utf8mb4_unicode_ci	Automation Tree Rules
cdef	MyISAM	7	65	456	9,216	utf8_general_ci	
cdef_items	MyISAM	21	57	1,212	3,072	utf8_general_ci	
color_template_items	InnoDB	44	372	16,384	0	utf8mb4_unicode_ci	Color Items for Color Templates
color_templates	InnoDB	4	4,096	16,384	0	utf8mb4_unicode_ci	Color Templates
colors	MyISAM	104	20	2,080	5,120	utf8_general_ci	
data_input	MyISAM	21	130	2,732	11,264	utf8_general_ci	
data_input_data	MyISAM	28,487	22	639,828	723,968	utf8_general_ci	
data_input_fields	MyISAM	139	86	12,044	10,240	utf8_general_ci	
data_local	MyISAM	1,409	21	30,764	76,800	utf8_general_ci	
data_source_profiles	InnoDB	1	16,384	16,384	16,384	utf8mb4_unicode_ci	Stores Data Source Profiles
data_source_profiles_cf	InnoDB	2	8,192	16,384	16,384	utf8mb4_unicode_ci	Maps the Data Source Profile Consolidation Functions
data_source_profiles_rra	InnoDB	4	4,096	16,384	16,384	utf8mb4_unicode_ci	Stores RRA Definitions for Data Source Profiles
data_source_purge_action	InnoDB	0	0	16,384	16,384	utf8mb4_unicode_ci	RRD Cleaner File Actions
data_source_purge_temp	InnoDB	0	0	16,384	65,536	utf8mb4_unicode_ci	RRD Cleaner File Repository
data_source_stats_daily	InnoDB	0	0	16,384	0	utf8mb4_unicode_ci	

新旧DBのエンジンとエンコードが混在

- ・ 0.8.xから存在したテーブルに関しては、
MyISAM、utf8のままとなる

良いか悪いか別として、これはなんとかかなりそうですが...

それ以外にも

- ・ 一部テーブルのデータタイプ、桁数、 DEFAULT制約の値が一致していないものがありました

※1.1.16時点での調査、現在は改善している可能性もあります

例えば

- mysql 5.7 compatibility

```
6 cacti.sql View
@@ -1607,10 +1607,10 @@ CREATE TABLE data_template_data (
1607 1607     t_name char(2) default NULL,
1608 1608     name varchar(250) NOT NULL default '',
1609 1609     name_cache varchar(255) NOT NULL default '',
1610     - data_source_path varchar(255) default NULL,
1611     - t_active char(2) default NULL,
1610     + data_source_path varchar(255) default '',
1611     + t_active char(2) default '',
1612 1612     active char(2) default NULL,
1613     - t_rrd_step char(2) default NULL,
1613     + t_rrd_step char(2) default '',
1614 1614     rrd_step mediumint(8) unsigned NOT NULL default '0',
1615 1615     t_data_source_profile_id char(2) default '',
1616 1616     data_source_profile_id mediumint(8) unsigned NOT NULL default '1',
```

<https://github.com/Cacti/cacti/commit/b9811548efc75dc903c7710a0de76a1229c88497>

例えば

• Change default of data_source_profile_id to 1

「All templates being imported throws error message:

03/23/2016 11:19:21 AM - CMDPHP ERROR: There are no RRA's assigned to local_data_id: x.
You have to resave them to make them work.]

2  cacti.sql View 

	@@ -1601,7 +1601,7 @@ CREATE TABLE data_template_data (
1601	1601 t_rrd_step char(2) default NULL,
1602	1602 rrd_step mediumint(8) unsigned NOT NULL default '0',
1603	1603 t_data_source_profile_id char(2) default '',
1604	- data_source_profile_id mediumint(8) unsigned NOT NULL default '0',
1604	+ data_source_profile_id mediumint(8) unsigned NOT NULL default '1',
1605	1605 PRIMARY KEY (id),
1606	1606 KEY local_data_id (local_data_id),
1607	1607 KEY data_template_id (data_template_id),
	

<https://github.com/Cacti/cacti/commit/b9811548efc75dc903c7710a0de76a1229c88497>

これから試す人たちへ

- 最新版のCacti1.1.xを試しましょう、比較的動作は安定しているはず
(1.0.0からだいぶBugfixが入っているので)
- おかしいなと思ったら、暫くして出る新しいバージョンを試してみましょう
(バグは次のリリースできっと直っているでしょう多分)
- Pluginは、Cacti1.xに対応しているかよく確認しましょう
- 新機能 あると思うな ドキュメント
(新機能を実現しているPlugin名で検索すると使い方がわかることがあります)
- 腕に覚えのある人は、0.8.x -> 1.1.xにチャレンジしよう！
活動が活発な今ならissue上げるとすぐ修正してくれると思うよ



0.8.8xを使い続けようとする場合

- ・遅かれ早かれ1.xに上げるか、別のツールに切り替えるかの選択をする必要がある
- ・0.8.8xを動かす場合、少なくともMySQLは5.7以前を使ったほうがよさそう（5.7以降の互換性の修正がなされていないなど）

