# Tutorial





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# INTRODUCTION

Utilisation d'un script avec la "Data Input Method", pour monitorer des indicateurs personnels sur un serveur. Un **merci a Adrian Goins** - President / CEO - Arces Network, LLC.

# .I. Réalisation d'un script shell:

Prenons comme exemple le nombre de connexion reseau sur une machine X. Il faut utiliser la commande netstat avec quelques arguments pour récuperer ce que l'on souhaite etudier.

exemple de fichier nb\_connect.sh:

```
HOST=`netstat -n | grep tcp | grep 1521 | awk -F ' ' '{print $5}' | awk -F
':' '{print $1}' | uniq | wc -1`
ALL=`netstat -n | grep tcp | grep 1521 | awk -F ' ' '{print $5}' | awk -F
':' '{print $1}' | wc -1`
typeset -i ALL
typeset -i HOST
printf "nb_connect_by_host:%d nb_connect_total:%d\n" $HOST $ALL
```

Je recupere ainsi le nombre total de connexion puis le nombre de connexion avec des machines ou serveurs distincts.

# .II. Configuration sur Cacti

## .II.a. Data Input Method

Console => Data Input Methods => Add (en haut a droite)

console gra	phs	
Console -> Data Input I	Methods -> (Edit)	Logged in as <b>admin</b> (Logout)
Create	Data Input Methods [new]	
New Graphs	Name	Nombra da connexions - DIM
Management	Enter a meaningful name for this data input method.	Intombre de connexions - Dimi
Graph Management	Input Type Choose what type of data input method this is.	Script/Command 🔹
Graph Trees	Toput Shing	
Data Sources	The data that is sent to the script, which includes the	Znath cartix/acrinte/nh, connact sh Zhostna
Devices	complete path to the script and input sources in <>	Typam_cacityscripts/hb_connection virusitio
Collection Methods	brackets.	
Data Queries		anneal anneate
Party Provident all all		cancei create

Data Input Plenious

#### Ensuite il faut ajouter un champ "Input field", faire Add

console gra	phs		
Console -> Data Input M	Aethods -> (Edit) -> Data Input Fields		Logged in as <b>admin</b> (Logout)
Create	Input Fields [edit: Nombre de connexions - DIM]		
New Graphs	Field [Input]	hostname 💌	
Management	Choose the associated field from the Input field.		
Graph Management	Friendly Name Enter a meaningful name for this data input method.	hostname	
Graph Trees	Pagular Expression Match		5 m
Data Sources	If you want to require a certain regular expression to be		
Devices	matched againt input data, enter it here (ereg format).		1
Collection Methods	Allow Empty Input		
Data Queries	from the user.	🗠 Allow Empty Input	
Data Input Methods	Special Type Code		
Templates	If this field should be treated specially by host templates, indicate so here. Valid keywords for this field	-	
Graph Templates	are 'hostname', 'snmp_community', 'snmp_username',	hostname	
Host Templates	'snmp_password', 'snmp_port', 'snmp_timeout', and		
Data Templates	simp_version.		
Import/Export			cancel create
Import Templates			cancer create
Export Templates			

## De même il faut définir, les données en sortie

console gra	phs	
Console -> Data Input M	Methods -> (Edit) -> Data Input Fields	Logged in as <b>admin</b> (Logout)
Create	Output Fields [edit: Nombre de connexions - DIN	4]
New Graphs Management	Field [Output] Enter a name for this Output field.	nb_connect_total
Graph Management	Friendly Name Enter a meaningful name for this data input method.	nombre de connexions - total
Graph Trees Data Sources	Update RRD File Whether data from this output field is to be entered	Vpdate RRD File
Devices	into the rrd file.	<ol> <li>Provide Resource Constraints and Advances</li> </ol>
Collection Methods		
Data Queries		cancel create
Data Input Methods		
Templates		

Il faut le refaire une deuxieme fois pour la 2eme donnée de sortie. A partir de la, vous devriez pouvoir sauvegarder votre **DATA INPUT METHOD** et avoir un résultat semblable à celui ci dessous:

console grag	ohs			
Console -> Data Input N	1ethods -> (Edit)		Logged in as <b>admin</b> (	Logout)
Create	Save Successfu	JI.		
New Graphs				
Management	Data Input Methods	[edit: Nombre de connexion	ns - DIM]	
Graph Management	Name		Newburghe services Dibt	
Graph Trees	Enter a meaningful nar	ne for this data input method.	Nombre de connexions - Dim	
Data Sources	Input Type Choose what type of d	ata input method this is	Script/Command 🔹	
Devices	Toront China	ata input metrod uns is.		
Collection Methods	The data that is sent to	the script, which includes the	znath anatis (aguinta/uh, agunget ah shaatug	
Data Queries	complete path to the s	cript and input sources in <>	[ <pain_cacuy <nosinal<="" nb_connection="" scripts="" td=""><td></td></pain_cacuy>	
Data Input Methods	brackets.			
Templates	Input Fields			b d d
Graph Templates	Name	Field Orden	Evicedly Name	Auu
Host Templates	Name	rield Order	rnenuy Name	

Data Templates	nostname	1	nostname		*
Import/Export	Output Fields			Ad	d
Import Templates	Name	Field Order	Friendly Name	Update RRA	
Export Templates	nb_connect_total	0 (Not In Use)	nombre de connexions - total	Selected	×
Configuration	nb connect host	0 (Not In Use)	Nombre de connexions - host	Selected	×
Settings					
Utilities				cancel save	
System Utilities				- uncer - bure	
User Management					

### .II.b. Data Templates

Il faut ensuite créer un Data template, il est plus simple de les définir toujours avec le même nom suivi ici de DT pour Data Template.

Pour Data Input method, il faut choisir celle que l'on vient juste de créer. Les autres valeurs par défaut ne sont pas à modifer.

Vame	
The name given to this data template.	Nombre de connexions - DT
Data Source	
Name 🗖 Use Per-Data Source Value (Ignore this Value)	[hostname] - Nombre de connexions
Data Input Method This field is always templated.	Nombre de connexions - DIM
Associated RRA's This field is always templated.	Daily (5 Minute Average) Monthly (2 Hour Average) Weekly (30 Minute Average) Yearly (1 Day Average)
S <b>tep</b> <ul> <li>Use Per-Data Source Value (Ignore this Value)</li> </ul>	300
Data Source Active Use Per-Data Source Value (Ignore this Value)	Data Source Active
Data Source Item []	
Internal Data Source Name	
🔲 Use Per-Data Source Value (Ignore this Value)	
Minimum Value	0
Maximum Value □ Use Per-Data Source Value (Ignore this Value)	0
Data Source Type Use Per-Data Source Value (Ignore this Value)	GAUGE
<b>Heartbeat</b> D Use Per-Data Source Value (Ignore this Value)	600

Une fois le Data Template cree, on peut y ajouter les Data sources Items, qui sont a definir de la maniere qui suit:

Data Source Item [nb_connect_total]	New
Internal Data Source Name           Image: Source Value (Ignore this Value)	nb_connect_total
Minimum Value           Use Per-Data Source Value (Ignore this Value)	0
Maximum Value Use Per-Data Source Value (Ignore this Value)	0
<b>Data Source Type</b> Use Per-Data Source Value (Ignore this Value)	GAUGE
Heartbeat           Heartbeat           Use Per-Data Source Value (Ignore this Value)	600
<b>Output Field</b> Use Per-Data Source Value (Ignore this Value)	nb_connect_total - nombre de connexions - total 💌

1: nb_connect_host × 2: nb_conn	ect_total ×
Data Source Item [nb_connect_host]	New
Internal Data Source Name	nb_connect_host
Minimum Value	0
Maximum Value	100
Data Source Type Use Per-Data Source Value (Ignore this Value)	GAUGE
Heartbeat	600
Output Field	nb_connect_host - Nombre de connexions - host

## .II.c. Graph Templates

Les Data sources Items crees, il n'y a plus qu'a faire le Graph Template qui va definir le type de graphique que l'on souhaite avoir.

Il n'y a dans un premier que le Name et le Titlte a définir:

onsole -> Graph Temp	olates -> (Edit)	Logged in as <b>admin</b> (Logou
Create New Graphs	Save Successful.	
Management	Graph Template Items [edit: Nombre de cor	nnexions - GT] Add
Graph Management	Graph Item Data Source Gra	ph Item Type CF Type Item Color
Graph Trees	No Items	
ata Sources		
Devices	Graph Item Inputs	Add
Collection Methods	Name	
Data Queries	No Inputs	
Data Input Methods		
femplate <i>s</i>	Template [edit: Nombre de connexions - GT]	
Graph Templates	Name	Nombre de connexions - GT
Host Templates	The name given to this graph template.	
Data Templates	Craph Tomplato	
Import/Export	Graph remplate	
Import Templates	Use Per-Graph Value (Ignore this Value)	Nombre de connexions
Export Templates	Image Format	
Configuration	Use Per-Graph Value (Ignore this Value)	PNG 💌
Utilities	Height	100
Pustore Utilities	Use Per-Graph Value (Ignore this Value)	120
Iser Management	Width	500
Logout User	– 📕 🗖 Use Per-Graph Value (Ignore this Value)	500
	Auto Scale Use Per-Graph Value (Ignore this Value)	☑ Auto Scale
	Auto Scale Options	C Usealt-autoscale
		····· Use -rait-autostaie-Max

Au niveau de l'option Graph Templates Items, il faut faire Add: En premier definir la courbe qui ici sera une surface pour le nombre total de connexions:

<b>Data Source</b> The data source to use for this graph item.	Nombre de connexions - DT - (nb_connect_total)	-
<b>Color</b> The color to use for the legend.	None	
<b>Graph Item Type</b> How data for this item is represented visually on the graph.	AREA	

CDEF Function         A CDEF (math) function to apply to this item on the graph.         Value         The value of an HRULE or VRULE graph item.         GPRINT Type         If this graph item is a GPRINT, you can optionally choose another format here. You can define additional types under "GPRINT Presets".         Text Format         Text that will be displayed on the legend for this graph item.	
Value         The value of an HRULE or VRULE graph item.         GPRINT Type         If this graph item is a GPRINT, you can optionally choose another format here. You can define additional types under "GPRINT Presets".         Text Format         Text that will be displayed on the legend for this graph item.	
GPRINT Type         If this graph item is a GPRINT, you can optionally choose another format here. You can define additional types under "GPRINT Presets".         Text Format         Text that will be displayed on the legend for this graph item.	
Text Format Text that will be displayed on the legend for this graph item.	
Insert Hard Return Forces the legend to the next line after this item. 🗖 Insert Hard Return	
Sequence	

Puis ici définir les legendes de ce graphique:

Data Source The data source to use for this graph item.	Nombre de connexions - DT - (nb_connect_total)
<b>Color</b> The color to use for the legend.	None
<b>Graph Item Type</b> How data for this item is represented visually on the graph.	
<b>Consolidation Function</b> How data for this item is represented statistically on the graph.	AVERAGE -
<b>CDEF Function</b> A CDEF (math) function to apply to this item on the graph.	None
<b>Value</b> The value of an HRULE or VRULE graph item.	
<b>GPRINT Type</b> If this graph item is a GPRINT, you can optionally choose another format here. You can define additional types under "GPRINT Presets".	Normal
Text Format Text that will be displayed on the legend for this graph item.	
Insert Hard Return Forces the legend to the next line after this item.	Insert Hard Return
Sequence	

# Il faut refaire l'operation precedente pour le second Output, et on obtient ensuite:

console gra	phs				V			ĺ
Console -> Graph Temp	lates -> (Edit)			Logg	ed in as <b>adm</b>	in (L	ogo	out)
Create	Save Su	ccessful.						
New Graphs	Jureau	oocoran						
Management	Graph Tem	plate Items [edit: Nombre de connex	kions - GT]				Ac	ld
Graph Management	Graph Item	Data Source	Graph Item Type	CF Type	Item Color			
Graph Trees	Item # 1	(nb_connect_total):	AREA	AVERAGE	D2D8F9	•	4	×
Data Sources	Item # 2	(nb_connect_total): Current:	GPRINT	LAST		+	4	×
Devices	Item # 3	(nb_connect_total): Average:	GPRINT	AVERAGE			4	×
Collection Methods	Item # 4	(nb_connect_total): Maximum:< <mark><hr/></mark>	GPRINT	MAX			4	×
Data Queries	Item # 5	(nb_connect_host):	LINE2	AVERAGE		+	4	×
Data Input Methods	Item # 6	(nb_connect_host): Current:	GPRINT	LAST			4	×
Templates	Item # 7	(nb_connect_host): Average:	GPRINT	AVERAGE		+	4	×
Graph Templates	Item # 8	(nb_connect_host): Maximum: <hr/>	GPRINT	MAX		+	4	×
Host Templates								_
Data Templates	Graph Item	Inputs					Ac	ld

Import/Export	Name		
Import Templates	Data Source [nb_connect_host]		×
Export Templates	Data Source [nb_connect_total]		×
Configuration			
Settings	Template [edit: Nombre de connexions - GT]		1. S.
Utilities	Name	Nombre de connexions - GT	
System Utilities	The name given to this graph template.		- 1 - E
User Management	Creath Template		
Logout User	- Graph remplate		
	☐ Title ✓ Use Per-Graph Value (Ignore this Value)	Nombre de connexions	
	Image Format           Use Per-Graph Value (Ignore this Value)	PNG -	
C P	Height Use Per-Graph Value (Ignore this Value)	120	
	Width Use Per-Graph Value (Ignore this Value)	500	

Une fois cela fait il n'y a plus qu'a .... aller sur un Device lui ajouter un Data template puis creer un graph avec le Graph template que l'on vient de definir, on a alors notre graphique.

Envoyer vos remarques et vos commentaires à cacti halte\_au\_spam\_at rondoudou DoT com site: <u>www.cacti.net</u>

forum: forums.cacti.net

