

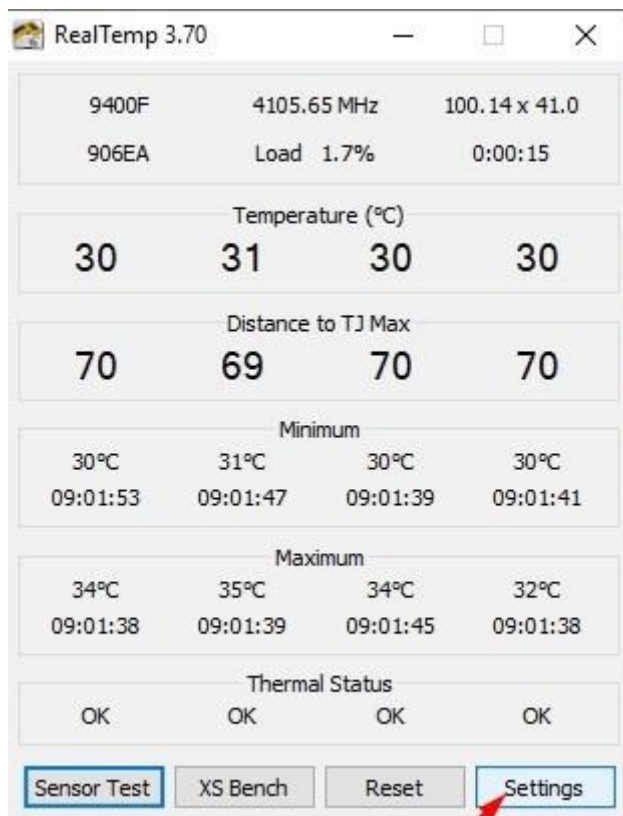
Integrating CPU Temperature Monitoring in Zabbix – Windows

Step 1 – Download the tools **Real Temp 3.70**, **Tail.exe**, and **Gawk.exe**.

- **Real Temp 3.70**
- **Tail.exe** and **Gawk.exe** ([UnxUpdates.rar](#))

Step 2 – Create a folder named **RealTemp_370** inside **Local Disk C** and extract **Real Temp** into it.

Step 3 – Open **RealTemp.exe**, and then click on **Settings**.



Note that the software is already monitoring the temperature. In my case, it is monitoring the temperature of the 4 CPU cores.

Step 4 – Check the options "**Start Minimized**", "**Log File**", and "**Minimize on Close**", then click **OK**.

☐ Disable Turbo ☐ TM Load ☒ C1E ☒ EIST
☒ Log File (seconds) ☐ Excel ☐ °F / °C
☐ Always On Top ☐ Task Bar ☒ Minimize on Close
☒ Start Minimized ☐ Tray Info APIC ID

Step 5 – Real Temp will collect temperature data every 5 seconds and store it in a log file. Zabbix will retrieve the last value collected from this log and report it to us.

Let's open the log file **RealTempLog.txt**.

RealTempLog.txt - Bloco de notas

Arquivo	Editar	Formatar	Exibir	Ajuda			
DATE	TIME	MHz	CPU_0	CPU_1	CPU_2	CPU_3	LOAD%
01/08/22	09:14:20	4105.65	32	32	30	30	2.0
01/08/22	09:14:25	4105.65	31	32	32	30	2.2
01/08/22	09:14:30	4105.65	32	33	30	30	2.2
01/08/22	09:14:35	4105.65	31	32	31	31	2.0
01/08/22	09:14:40	4105.65	33	33	31	32	2.9
01/08/22	09:14:45	4105.65	31	32	30	30	2.1
01/08/22	09:14:50	4105.65	32	40	31	32	3.4
01/08/22	09:14:55	4105.65	32	33	30	31	2.3
01/08/22	09:15:00	4105.65	31	32	31	30	2.0

Inside the file, we will have several columns as shown in the image. Since my CPU has 4 cores, the program will list columns from **CPU_0** to **CPU_3**.

- **DATE:** Shows the date of the data collection.
- **TIME:** Shows the time of the data collection.
- **MHz:** Shows the clock speed.
- **CPU_:** The CPU core.
- **Load%:** Shows the CPU usage percentage. Since Zabbix natively has the function `system.cpu.util`, we will not collect CPU utilization data.

We will use the **CPU_0** field as the reference for the processor temperature.

Step 6 – Now we will use **Tail.exe** and **Gawk.exe** ([Link]). After downloading, open the **UnxUpdates.zip** file and extract **Gawk** and **Tail** into the **system32** folder (C:\Windows\System32).

UnxUpdates.zip - Arquivo ZIP, tamanho descomprimido 1.810.432 bytes

Nome	Tamanho	Comprimido	Tipo	Modificado	CRC32
fmt.exe	18.432	8.967	Aplicativo	20/06/2003 11:57	C1E12FC6
fold.exe	15.872	7.410	Aplicativo	20/06/2003 11:57	2232D1BE
gawk.exe	204.800	93.442	Aplicativo	02/10/2003 03:17	1CC802E7
grep.exe	135.680	68.116	Aplicativo	23/10/2003 13:35	C3248BB6
head.exe	19.456	9.180	Aplicativo	20/06/2003 11:57	0C156523
join.exe	20.992	10.167	Aplicativo	20/06/2003 11:57	DD7BE4C8
less.exe	108.544	46.582	Aplicativo	02/10/2003 03:17	6B72F193
lesskey.exe	11.264	5.029	Aplicativo	02/10/2003 03:17	C535E5CA
make.exe	168.448	74.870	Aplicativo	05/10/2003 11:49	F1F154B2
md5sum.exe	30.720	13.201	Aplicativo	20/06/2003 11:57	C959A7C2
nl.exe	44.544	20.292	Aplicativo	20/06/2003 11:57	F49BB170
od.exe	30.208	14.777	Aplicativo	20/06/2003 11:57	00FC008E
paste.exe	15.872	7.082	Aplicativo	20/06/2003 11:57	364B7F92
pr.exe	31.232	14.062	Aplicativo	20/06/2003 11:57	B00F2055
ptx.exe	53.760	24.491	Aplicativo	20/06/2003 11:57	49A786BA
sed.exe	94.720	51.029	Aplicativo	25/10/2003 09:19	62D5366D
sha1sum.exe	30.720	13.201	Aplicativo	20/06/2003 11:57	6D9D2093
sort.exe	49.152	26.174	Aplicativo	23/10/2003 13:55	A46BB753
split.exe	17.920	8.282	Aplicativo	20/06/2003 11:57	1FEAFE17
sum.exe	20.480	9.977	Aplicativo	20/06/2003 11:57	AA3D5DC0
tac.exe	41.472	18.926	Aplicativo	20/06/2003 11:57	438C3B4E
tail.exe	32.768	15.856	Aplicativo	20/06/2003 11:57	CDCE0904
tr.exe	26.624	12.887	Aplicativo	20/06/2003 11:57	D08D432A

Caminho e opções da extração

Geral Avançado

Caminho de destino (se o caminho não existir, ele será criado)

C:\Windows\System32

Exibição

Nova Pasta

Método de atualização

☒ Extrair e substituir arquivo

☐ Extrair e atualizar arquivo

☐ Atualizar somente arquivos existentes

Método de substituição

☒ Perguntar antes de substituir

☐ Substituir sem perguntar

☐ Omitir arquivos existentes

☐ Renomear automaticamente

Diversos

☐ Extrair arquivos para subpastas

☐ Manter arquivos inativos

☐ Exibir arquivos no Explorer

Salvar configurações

ServiceProfiles

ServiceState

servicing

Setup

ShellComponents

ShellExperiences

SKB

SoftwareDistribution

Speech

Speech_OneCore

System

System32

SystemApps

SystemResources

SysWOW64

TAPI

Tasks

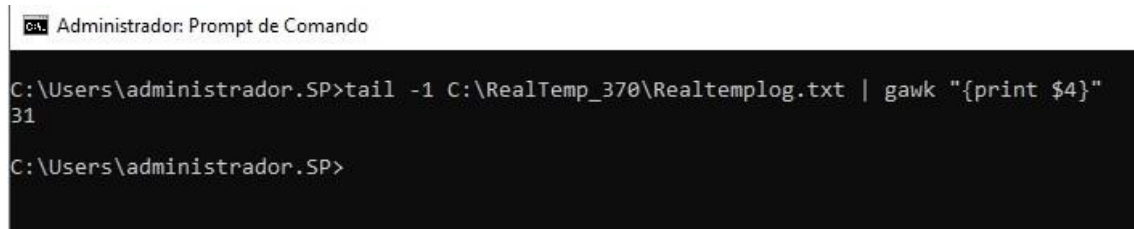
Temp

TextInput

OK Cancelar Ajuda

Step 7 – Let's verify the data collection. Open **cmd.exe** as Administrator and run the following command:

```
tail -1 C:\RealTemp_370\Realtemplog.txt | gawk "{print $4}"
```



```
Administrador: Prompt de Comando
C:\Users\administrador.SP>tail -1 C:\RealTemp_370\Realtemplog.txt | gawk "{print $4}"
31
C:\Users\administrador.SP>
```

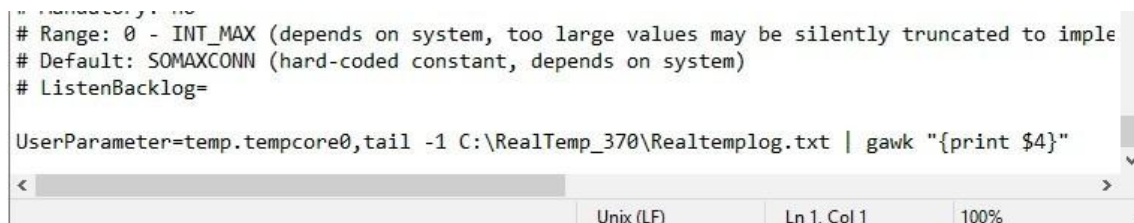
The value **31** is the current temperature.

Explanation: Since we placed **Tail** and **Gawk** inside **system32**, we can call them via **cmd** without needing a URL. Then, we provide the URL of the log file, followed by the command to call **Gawk** with the parameter "{print \$4}", which displays the value in column 4 (\$4), representing our **CPU_0**.

After this, the program is correctly configured.

Step 8 – In the folder where the Zabbix Agent was installed (C:\Program Files\Zabbix Agent), open the **zabbix_agentd.conf** file and add the following line at the end:

```
UserParameter=temp.tempcore0,tail -1 C:\RealTemp_370\Realtemplog.txt | gawk "{print $4}"
```



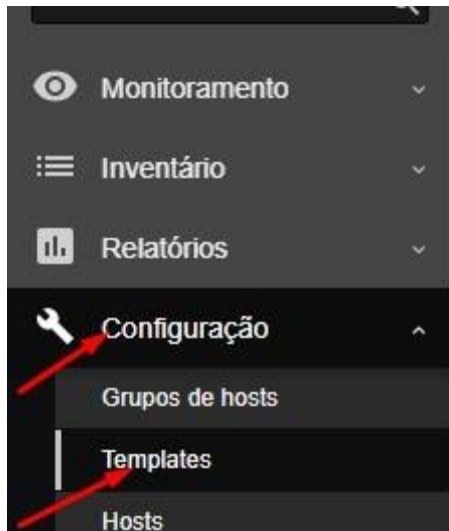
```
# Range: 0 - INT_MAX (depends on system, too large values may be silently truncated to imple
# Default: SOMAXCONN (hard-coded constant, depends on system)
# ListenBacklog=

UserParameter=temp.tempcore0,tail -1 C:\RealTemp_370\Realtemplog.txt | gawk "{print $4}"
< | >
Unix (LF) Ln 1, Col 1 100%
```

Save and close.

Step 9 – In **Services.msc**, restart the **Zabbix Agent** service.

Step 10 – Log in to your **Zabbix**.



Go to **Configuration > Templates**.

Create a **New Template**.

Name it **Template Temperature Windows**.

In Applications, create a new application and name it "Windows Temperature Template" and create it.

Now go to ITEM and set the following configurations according to the image:

Name: Temperature Core 0

Type: Zabbix Agent

Key: temp.tempcore0

Unit: °C

Update interval: 10s (you can change this)

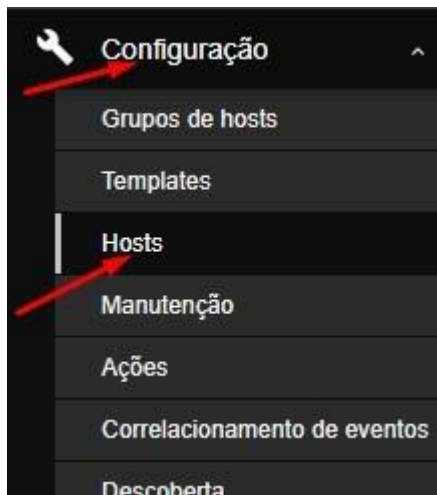
Applications: Choose "Windows Temperature Template"

The screenshot shows the Zabbix web interface for configuring a new item. The breadcrumb trail is: Todos os templates / Template Temperatura Windows / Aplicações 1 / Itens 1. The 'Item' tab is selected, and the 'Pré-processamento' sub-tab is active. The configuration form includes the following fields:

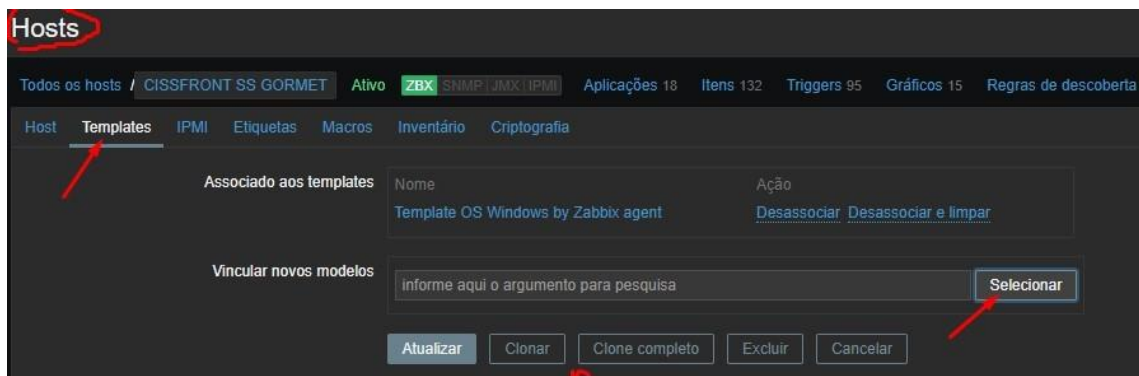
- * Nome:** Temperatura Core 0
- Tipo:** Agente Zabbix (dropdown)
- * Chave:** temp.tempcore0
- Tipo de informação:** Numérico (inteiro sem sinal) (dropdown)
- Unidades:** C
- * Intervalo de atualização:** 10s
- Intervalo customizado:** A table with columns 'Tipo', 'Intervalo', and 'Período'. It contains one row with 'Flexível', 'Agendamento', '50s', and '1-7,00:00-24:00'. There is an 'Adicionar' link below the table.
- * Período de retenção do histórico:** 'Não manter histórico' and 'Período de armazenamento' set to '90d'.
- * Período de retenção das estatísticas:** 'Não manter estatísticas' and 'Período de armazenamento' set to '365d'.
- Mostrar valor:** Sem alterar (dropdown)
- Nova aplicação:** An empty text input field.
- Aplicações:** A list box showing '-Nenhum-' and 'Template Temperatura Windows'.
- Preencha o campo do inventário do host:** -Nenhum- (dropdown)
- Descrição:** A large text area for a description.
- Ativo:** A checked checkbox.

Save the ITEM.

Step 11 - Let's add the Template to our Host. In Settings, choose Host.



Within the Host, click on Templates and link a new Template.



Add our temperature Template and click on Update Host Template.



Done, temperature monitoring created!

Now let's check the Collected Data!

In Monitoring, click on Hosts and choose your Host.