Projet SDIS29

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- Phase Analyse
- Partie Développeur
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Introduction

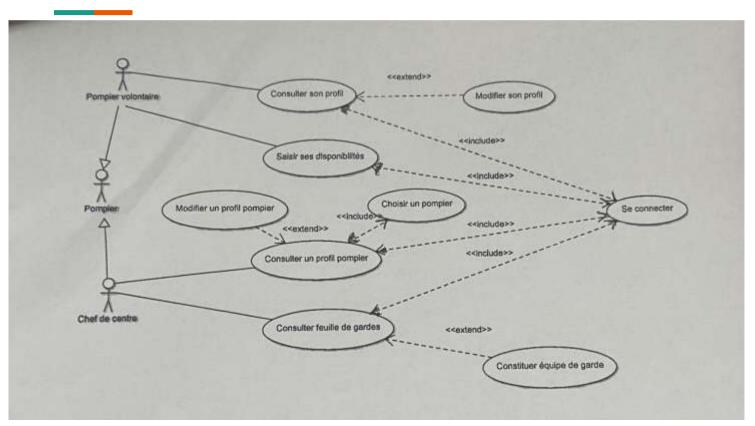
Qu'est ce que le SDIS29?

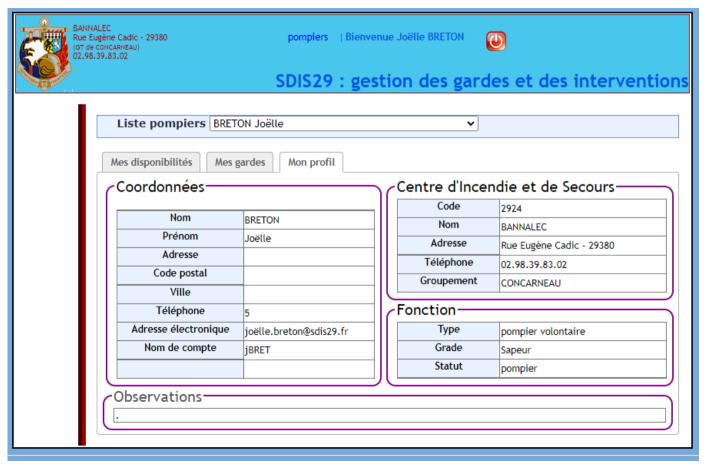
Besoin du client?

Organisation?

Phase Analyse

Diagramme des cas d'utilisation





Maquette



Maquette



Maquette

Version final

			Lun	17/10)	_	Mar	18/10)		Mer	19/10	1		Jeu 2	20/10	1		Ven :	21/10)		Sam	22/10)		Dim 2	23/10)
VOLONTAIRE	N° bip	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Breton Joëlle	5		Х	(A)		х	П			Х	Х			Х	х	Х	П	Х		х	х		Х					Х	Х
Cabon Yohann	6					Х		Х	Х		Х	Х			X	×		Х	Х				Х	х	Х		Х	Х	
Carette Patrick	12	Х	Х																Х	Х	Х	Х	Х		X	×	Х	Х	
Clébert Marc	19	Х	Х		Х						Х	Х					Х	Х	Х	х	х		Х				Х	Х	Х
Dubois Yves	9																												
Dujardin Alex	10	Х		Х	П	Х	Х	Х	Х		Х		Х	Х	Х									Х	Х	Х	Х		Г
Dupond Carole	4			х	Х	х	Х	х		х	Х			Х	Х	х		Х	х										
Durand François	2		Х	Х		Х	Х								Х	Х		Х	Х		Х		Х		Х		Х		Х
Fernandez Henri	18	Х	П	х	Х	П	Х	Х		Х		Х	Х		Х	Х	Х	П			х	Х	Г	Х		Х		\Box	Х
Legall Yasmina	3	Х			X	X		х	Х	Х	Х		х		х		х			х	×	X			X	х	Х	Х	
Martin Alain	17	Х	х	×			X	X	Х			Х	х	х			х	х			х	х		х	х	х		Х	Х
Yayaoui Pierre	11			×	Х	П	X		Х	х		X	х	Х		8888	Х		х	х		х			Х	х		\Box	х

Remarques:

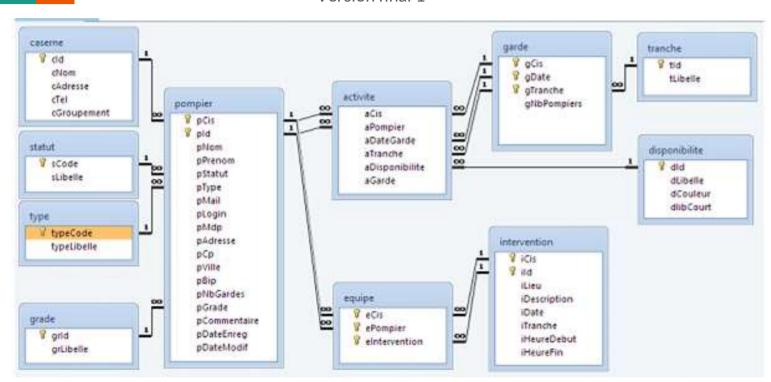
Chaque case correspond à une tranche horaire d'un jour de la semaine :

- Une case blanche signifie que le volontaire est disponible pour cette tranche.
- Une case hachurée signifie que le volontaire est au travail pendant cette tranche.
- Une case pleine signifie que le volontaire est indisponible pendant cette tranche.
- Une croix indique que le volontaire a été désigné de garde pour cette tranche horaire.

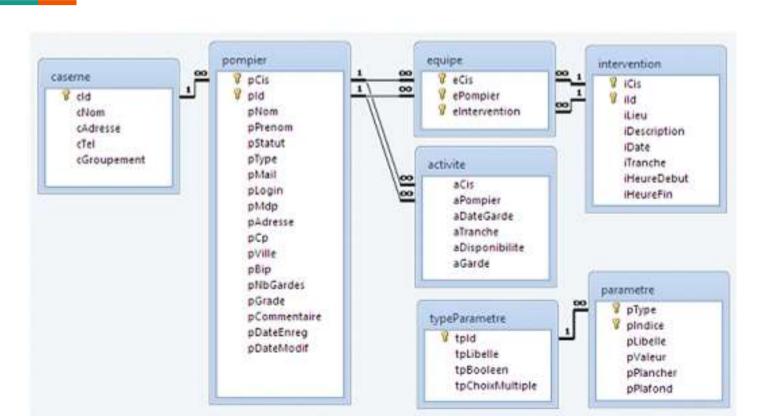
Exemples pour le lundi 17/10 :

- Durand François est disponible pour les quatre tranches horaires. Il est de garde pour les tranches 2 et 3.
- Legall Yasmina est au travail pour les tranches horaires 2, 3 et 4. Elle est de garde pour les tranches 1 et 4.
- Dubois Yves est indisponible pour les quatre tranches horaires, il n'est donc pas de garde pour cette journée

Modèle Logique de Données Relationnel



Modèle Logique de Données Relationnel

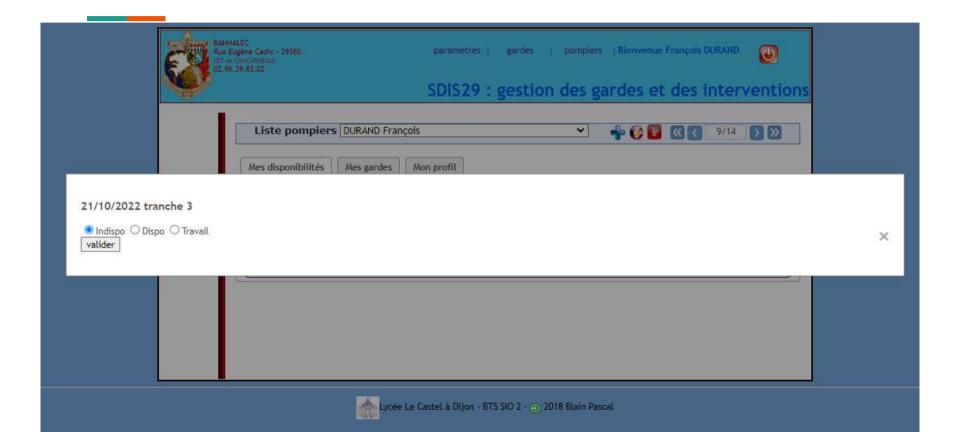


Partie Développeur

Mission 1: Gestion de profil

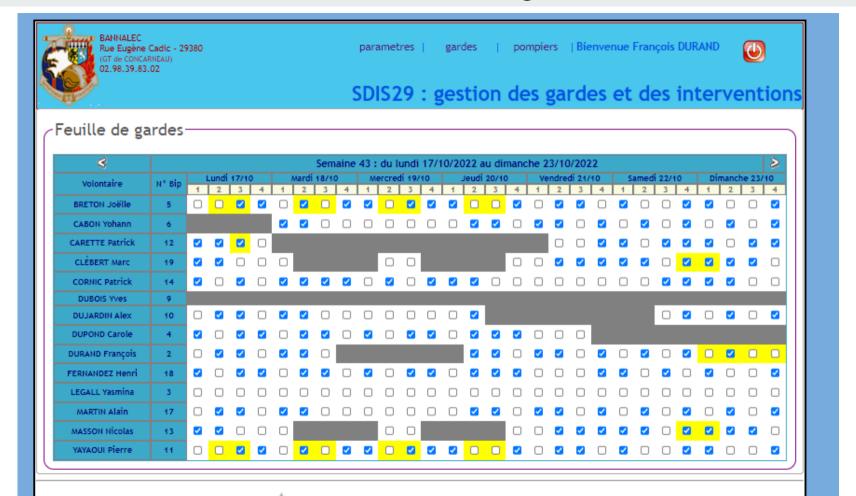








Mission 2 : Gestion de la feuille de garde

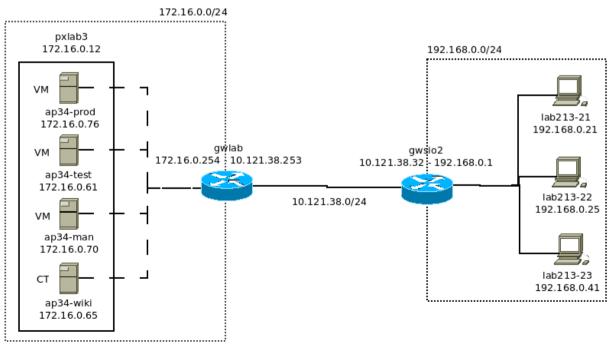


Partie Réseaux

Les serveurs:

- Serveur de Production (ap34-prod)
- Serveur de Test (ap34-test)
- Serveur de Supervision (ap34-mon)
- Serveur dokuwiki (ap34-wiki)
- Serveur de backup (MV Virtualbox)

Schéma réseau:



Sur tous les serveurs :

- clé ssl
- dpkg-reconfigure tzdata
- vim /etc/profile.d/proxy.sh :
- # configuration proxy
- export http_proxy "http://10.121.38.1:8080"
- export https_proxy "http://10.121.38.1:8080"
- export no_proxy "127.0.0.1,localhost"

Sur le serveur de Production et de Test :

- apt install gemu-guest-agent apache2 mariadb-server php adminer -y
- In -s /usr/share/adminer/adminer /var/www/html/adminer (uniquement sur ap34-test)
- Serveur de backup (MV Virtualbox)

```
Base de donnés:
```

mysql_secure_installation

mariadb> create database sdis;

mariadb> create user 'sio'@'%' identified by 'sio';

mariadb> GRANT ALL PRIVILEGES ON sdis.* TO 'sio'@'%';

Mission 2 - Supervision: Nagios

Qu'est ce que nagios?

Un logiciel qui surveille les systèmes, les réseaux et l'infrastructure. Nagios offre des services de surveillance et d'alerte pour les serveurs, les commutateurs, les applications et les services

Installation nagios

Apt install nagios 4 sur ap34-mon

```
http://ap34-mon/nagios4/
nom d'utilisateur nagiosadmin

Mdp: A******

Supervision sur les ap34-prod et ap34-test

On a créé les différents hosts qu'on va superviser

cd /etc/nagios4/objetcs/# ls
```

ap34-prod

ap34-prod.cfg

hostgroup

nano localhost.cfg

```
define hostgroup {

hostgroup_name linux-servers ; The name of the hostgroup
alias Linux Servers ; Long name of the group
members localhost, ap34-prod, ap34-test, gwsio2, gwlab, pxlab3, px, ; Comma separated list
}
```

localhost.cfg

```
define service {
                           local-service
                                                   ; Name of service template to use
   use
   hostgroup name
                           servers-web
    service description
                           HTTP
    check command
                           check http
   notifications enabled
define service {
                           generic-service ;Use generic-service template
   use
   hostgroup name
                           ap34
                                    ; S'applique au groupe en question
                            check-lin-load; Nom du service
    service description
    check command
                            check lin load!public!--v2c!netsl!3,2,2!3,2,2 ; Command
```

Command.cfg

apt install-plugins-nagios
/etc/nagios4/objects#

nano commande.cfg

```
define command {
          command_name check_lin_load
          command_line $USER1$/check_snmp_load.pl -H $HOSTADDRESS$ -C $ARG1$ $ARG2$ -T $ARG3$ -w $ARG4$ -c $ARG5$
}
define command {
          command_name check_lin_mem
          command_line $USER1$/check_snmp_mem.pl -H $HOSTADDRESS$ -C $ARG1$ $ARG2$ -w $ARG3$ -c $ARG4$
}
define command {
          command_line $USER1$/check_snmp_mem.pl -B $HOSTADDRESS$ -C $ARG1$ $ARG2$ -w $ARG3$ -c $ARG4$
}
```

Service

Nagios*

General

Home Documentation

Current Status

Tactical Overview

Map (Legacy)

Hosts Services

Host Groups

Summary

Grid

Service Groups

Summary

Grid

Problems

Services (Unhandled)

Hosts (Unhandled) Network Outages

Quick Search:

Service Status Detail

lost ◆◆	Service ◆◆	Status ★◆	Last Check ★◆	Duration ★◆		
ap34-prod	HTTP	ОК	11-16-2022 14:24:57	0d 0h 34m 30s		
	PING	ОК	11-16-2022 14:26:14	30d 2h 56m 33s		
	SSH	OK	11-16-2022 14:27:45	30d 3h 29m 8s		
	check-lin-load	ок	11-16-2022 14:29:14	27d 23h 5m 58s		
	check-lin-mem	ОК	11-16-2022 14:20:45	27d 23h 4m 59s		
	check-snmp-int	ОК	11-16-2022 14:24:57	27d 22h 55m 9s		
	check-snmp-storage	ОК	11-16-2022 14:26:27	27d 23h 6m 44s		
	chk-dns-ext	ОК	11-16-2022 14:27:57	28d 5h 54m 14s		
ap34-test	HTTP	OK	11-16-2022 14:28:06	0d 1h 1m 21s		
	PING	ок	11-16-2022 14:28:14	30d 2h 59m 0s		
	SSH	ОК	11-16-2022 14:25:10	27d 6h 52m 10s		
	check-lin-load	ОК	11-16-2022 14:26:40	27d 23h 3m 1s		
	check-lin-mem	OK	11-16-2022 14:28:10	27d 23h 2m 2s		
	check-snmp-int	ОК	11-16-2022 14:19:40	27d 22h 54m 12s		
	check-snmp-storage	ОК	11-16-2022 14:21:10	27d 23h 1m 3s		
	chk-dns-ext	OK	11-16-2022 14:25:22	28d 5h 53m 15s		

General	Limit Results: 10	0 🗸					
Home	Host **	Service **	Status **	Last Check ★◆	Duration ★◆	Attempt ★◆	Status Information
Documentation	ap34-prod	HTTP	OK	11-16-2022 15:14:57	0d 1h 24m 7s	1/4	HTTP OK: HTTP/1.1 200 OK - 2645 bytes in 0.002 second response time
Current Status		PING	OK	11-16-2022 15:16:14	30d 3h 46m 10s	1/4	PING OK - Packet loss = 0%, RTA = 0.35 ms
Tactical Overview		SSH	OK	11-16-2022 15:17:45	30d 4h 18m 45s	1/4	SSH OK - OpenSSH_8.4p1 Debian-5+deb11u1 (protocol 2.0)
Map (Legacy)		check-lin-load	OK	11-16-2022 15:09:14	27d 23h 55m 35s	1/3	Load (CPUs: 1): 0.02 0.01 0.00 : OK
Hosts		check-lin-mem	OK	11-18-2022 15:10:45	27d 23h 54m 36s	1/3	Ram: 1896, Swap: 096:: OK
Services		check-snmp-int	ОК	11-16-2022 15:14:57	27d 23h 44m 46s	1/3	Alarm in 5 seconds
Host Groups		check-snmp-storage	OK	11-16-2022 15:16:27	27d 23h 56m 21s	1/3	/: 13%used(1245MB/9913MB) (<80%) : OK
Summary		chk-dns-ext	OK	11-16-2022 15:17:57	28d 6h 43m 51s	1/3	DNS OK: 0.022 seconds response time. 9.9.9.9 returns dns9.quad9.net.
Grid	ap34-test	HTTP	OK	11-16-2022 15:18:06	0d 1h 50m 58s	1/4	HTTP OK: HTTP/1.1 302 Found - 485 bytes in 0.001 second response time
Service Groups Summary		PING	ОК	11-16-2022 15:18:14	30d 3h 48m 37s	1/4	PING OK - Packet loss = 0%, RTA = 0.33 ms
Grid Problems Services (Unhandled) Hosts (Unhandled) Network Outages Quick Search:		SSH	OK	11-16-2022 15:15:10	27d 7h 41m 47s	1/4	SSH OK - OpenSSH_8.4p1 Debian-5+deb11u1 (protocol 2.0)
		check-lin-load	OK	11-16-2022 15:16:40	27d 23h 52m 38s	1/3	Load (CPUs: 1): 0.00 0.00 0.00 : OK
		check-lin-mem	OK	11-16-2022 15:18:10	27d 23h 51m 39s	1/3	Ram : 1996, Swap : 096 : : OK
		check-snmp-int	OK	11-16-2022 15:09:40	27d 23h 43m 49s	1/3	Alarm in 5 seconds
		check-snmp-storage	OK	11-16-2022 15:11:10	27d 23h 50m 40s	1/3	/: 13%used(1313MB/9913MB) (<80%) : OK
		chk-dns-ext	OK	11-16-2022 15:15:22	28d 6h 42m 52s	1/3	DNS OK: 0.021 seconds response time, 9.9.9.9 returns dns9.quad9.net.
	gwlab	PING	OK	11-16-2022 15:16:53	27d 23h 34m 2s	1/4	PING OK - Packet loss = 0%, RTA = 0.32 ms
		SSH	OK	11-16-2022 15:18:14	27d 23h 32m 55s	1/4	SSH OK - OpenSSH_8.4p1 Debian-5+deb11u1 (protocol 2.0)
eports	gwsio2	PING	OK	11-16-2022 15:18:14	7d 0h 25m 11s	1/4	PING OK - Packet loss = 0%, RTA = 0.51 ms
Availability		SSH	OK	11-16-2022 15:18:14	7d 0h 25m 11s	1/4	SSH OK - OpenSSH_8.4p1 Debian-5+deb11u1 (protocol 2.0)
Trends (Legacy)	localhost	Current Load	OK	11-16-2022 15:17:36	29d 5h 22m 39s	1/4	OK - load average: 0.00, 0.00, 0.00
Alerts History Summary		Current Users	OK	11-16-2022 15:17:06	30d 3h 50m 34s	1/4	USERS OK - 1 users currently logged in
		PING	OK	11-16-2022 15:18:14	30d 3h 55m 10s	1/4	PING OK - Packet loss = 0%, RTA = 0.03 ms
Histogram (Legacy)		Root Partition	OK	11-16-2022 15:18:14	30d 3h 52m 19s	1/4	DISK OK - free space: / 8009 MB (84% inode=93%):
Notifications		SSH	OK	11-16-2022 15:18:14	34d 23h 25m 12s	1/4	SSH OK - OpenSSH_8.4p1 Debian-5+deb11u1 (protocol 2.0)
Event Log		Total Processes	OK.	11-16-2022 15:14:06	30d 3h 52m 19s	1/4	PROCS OK: 34 processes with STATE = RSZDT
VAUS		chk-dns-ext	OK	11-16-2022 15:17:18	28d 8h 41m 54s	1/3	DNS OK: 0.021 seconds response time. 9.9.9.9 returns dns9.quad9.net.
ystem Comments	px	PING	OK	11-16-2022 15:15:16	0d 4h 53m 48s	1/4	PING OK - Packet loss = 0%, RTA = 0.48 ms
	T 300.	SSH	OK	11-16-2022 15:16:35	0d 4h 52m 29s	1/4	SSH OK - OpenSSH_8.4p1 Debian-5+deb11u1 (protocol 2.0)
Downtime Process Info	pxlab3	PING	OK	11-16-2022 15:18:14	30d 2h 47m 34s	1/4	PING OK - Packet loss = 0%. RTA = 0.45 ms
Performance Info	Second .	SSH	OK	11-16-2022 15:15:36	30d 2h 46m 14s	1/4	SSH OK - OpenSSH_8.4p1 Debian-5+deb11u1 (protocol 2.0)
Scheduling Queue		chk-dns-ext	OK	11-18-2022 15:17:31	28d 8h 40m 55s	1/3	DNS OK: 0.021 seconds response time. 9.9.9.9 returns dns9.guad9.net.

Mission 3 - Rsyslog

Sur le serveur ap34-mon :

```
vim /etc/rsyslog.conf
...
module(load="imudp")
input(type="imudp" port="514")
...
```

Mission 3 - Rsyslog

Script d'archivage des logs.

Mission 3 - Rsyslog

Sur les postes clients (ap34-prod, ap34-test):

```
vim /etc/systemd/journald.conf
ForwardToSyslog=yes
vim /etc/rsyslog.conf
*.* @172.16.0.70:514
```

Certificat SSL auto-signé:

sudo a2enmod ssl

sudo systemctl restart apache2

sudo openssl req -x509 -nodes -days 365 -newkey rsa:2048 -keyout /etc/ssl/private/apache-selfsigned.key -out /etc/ssl/certs/apache-selfsigned.crt

```
Country Name (2 letter code) [AU]:FR
State or Province Name (full name) [Some-State]:Bourgogne-Franche-Comté
Locality Name (eg, city) []:Dijon
Organization Name (eg, company) [Internet Widgits Pty Ltd]:SDIS29
Organizational Unit Name (eg, section) []:
Common Name (e.g. server FQDN or YOUR name) []:ap34
Email Address []:ap34@localhost
```

001-default-ssl.conf:

vim /etc/apache2/sites-available/001-default-ssl.conf

```
ServerName 172.16.0.61
DocumentRoot /var/www/html

ErrorLog ${APACHE_LOG_DIR}/error.log
CustomLog ${APACHE_LOG_DIR}/access.log combined

SSLEngine on
SSLCertificateFile /etc/ssl/certs/apache-selfsigned.crt
SSLCertificateKeyFile /etc/ssl/private/apache-selfsigned.key

</VirtualHost>
```

sudo a2ensite 001-default-ssl.conf sudo systemctl reload apache2

000-default.conf:

vim /etc/apache2/sites-available/000-default.conf

```
ServerName ap34-test
    Redirect / https://ap34-test/
    ErrorLog ${APACHE_LOG_DIR}/error.log
    CustomLog ${APACHE_LOG_DIR}/access.log combined
</VirtualHost>
```

sudo systemctl reload apache2

Script de backup de la base de donné :

```
#!/bin/bash

DAT=$(date "+%u")

ssh root@ap34–test "mysqldump –u root ––password=root –B sdis" | gzip > /root/backup–sdis/old/sdis–
$DAT.sql.gz

cp /root/backup–sdis/old/sdis–$DAT.sql.gz /root/backup–sdis/sdis.latest.gz
```

Script de restauration de la base de donné :

```
#!/bin/bash
zcat /root/backup–sdis/sdis.latest.gz | ssh root@ap34–test "mysql –u sio ––password=sio –B sdis"
```