



C.T.H – Cyber Tech Helper
Société d'aide dans les technologies
et services informatiques

Document Technique :
**Installation d'un serveur de messagerie
sur Linux Debian Bookworm avec un relai
SMTP vers les boites mails Office 365**



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Installation d'un serveur de messagerie sur Linux Debian Bookworm avec un relai SMTP vers les boîtes mails Office 365

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Objectif du document

L'objectif de ce document est de fournir une procédure détaillée pour l'installation et la configuration d'un serveur de messagerie avec relais SMTP sur une plateforme Linux Debian, permettant de transmettre les courriels via une boîte mail Office 365.

De manière complémentaire, ce document décrira les étapes précises pour installer le serveur, configurer les paramètres nécessaires à l'authentification et à la sécurisation des échanges, et assurer une intégration fluide entre le serveur SMTP et la plateforme Office 365.

En annexe, cette procédure détaillera les actions spécifiques à effectuer pour paramétrer le système Linux Debian, tester le relais SMTP, et valider la bonne transmission des courriels vers les destinataires internes et externes.



Caractéristique générale

Expression des besoins

Dans le cadre d'une optimisation des services de communication interne et externe, la direction informatique nous demande de mettre en place un serveur de messagerie avec un relai SMTP intégré. Ce serveur permettra de transmettre les courriers électroniques via une boîte mail Office 365, conformément aux standards de sécurité et de performance de l'entreprise.

La solution retenue par la direction informatique repose sur l'installation et la configuration d'un serveur dédié, agissant comme relai SMTP, qui sera en mesure de gérer l'acheminement des messages tout en s'intégrant de manière transparente avec la plateforme Office 365. Cette architecture garantit une communication fiable, rapide et sécurisée, tout en respectant les meilleures pratiques en matière de gestion des flux de messagerie.

Le serveur sera accessible depuis tous les postes connectés au réseau interne de l'entreprise et prendra en charge les authentifications nécessaires pour le transfert sécurisé des courriels vers les destinataires internes et externes.

SMTP

Cet acronyme signifie « Simple Mail Transfer Protocol ». Il s'agit d'un protocole standard utilisé pour l'envoi de courriers électroniques sur Internet. SMTP permet la transmission des messages entre serveurs de messagerie ainsi que l'envoi des emails depuis des clients de messagerie. Ce protocole fonctionne généralement sur le port 25 ou le port 587 pour les connexions sécurisées.

Office 365

Cet outil désigne une suite de services cloud proposée par Microsoft. Elle inclut des applications telles que Word, Excel, PowerPoint, ainsi que des services en ligne comme Outlook pour la messagerie électronique, OneDrive pour le stockage, et Teams pour la collaboration. Office 365 est accessible par abonnement et permet une utilisation sur divers appareils, avec des fonctionnalités intégrées de synchronisation et de collaboration en temps réel.



Les pré-requis

Pour réaliser cette configuration, il est nécessaire de disposer d'un système informatique capable de faire fonctionner :

- **Le service Postfix**, pour assurer les fonctions de messagerie et le relai SMTP.
- **Le paquet mailutils**, afin de permettre les tests d'envoi de courriers électroniques.
- **Le paquet openssl**, indispensable pour sécuriser les connexions avec TLS.

Cette installation doit être effectuée sur un ordinateur utilisant le système d'exploitation **GNU Linux Debian Bookworm**. L'utilisation d'autres distributions ou versions de Linux est envisageable, mais leur compatibilité avec cette procédure n'a pas été vérifiée.

A qui s'adresse ce document ?

Étant donné sa technicité, cette documentation est destinée aux techniciens informatiques disposant de solides compétences en systèmes et réseaux, avec une expertise particulière dans l'utilisation du système d'exploitation GNU/Linux Debian.

Éléments de configuration

Dans cette partie du document, nous allons parler des critères de configurations suivants :

Éléments de configuration réseau

- Le nom de la machine faisant fonctionner le service de messagerie est : mailserver.
- Le nom FQDN (Fully Qualified Domain Name) de l'hôte est : mailserver.alizee.
- Ce nom est utilisé dans la configuration des directives SMTP et DNS.
- L'adresse IP statique du serveur est : 10.192.22.5/24
- La passerelle par défaut est : 255.255.255.0
- Les serveurs DNS configurés sont : 8.8.8.8 et 8.8.4.4.

Ces paramètres garantissent une configuration réseau adaptée pour un serveur de messagerie avec relai SMTP.



Éléments de configuration applicatif

- Le service de messagerie utilisé est : Postfix.
- Le fichier principal de configuration de Postfix est situé à : `/etc/postfix/main.cf`.
- Le relai SMTP configuré est : `smtp.office365.com` sur le port 587.
- Les paramètres d'authentification SMTP incluent :
 - Nom d'utilisateur : `alizer-lecerf@mailserver.alizer..com`.
 - Mot de passe : `*****` (stocké dans le fichier `/etc/postfix/sasl_passwd`).
- Les extensions TLS activées pour sécuriser les connexions :
 - Certificat CA utilisé : `/etc/ssl/certs/ca-certificates.crt`.
- Le format d'encodage des caractères utilisé dans les messages est : UTF-8.
- Les journaux de messagerie sont générés dans le fichier : `/var/log/mail.log`.

Ces paramètres assurent une configuration applicative fonctionnelle et sécurisée pour un serveur de messagerie utilisant un relai SMTP vers Office 365.

Éléments matériels

Le meilleur choix d'infrastructure est porté sur la mise en place de matériel performant et compatible avec les besoins d'un serveur de messagerie. L'installation du système d'exploitation sera réalisée avec une distribution GNU/Linux Debian en version 64 bits.

Il est nécessaire que la machine soit correctement intégrée au réseau local (résolution des noms DNS, carte réseau configurée, adresse IP active, passerelle par défaut) et qu'elle dispose d'un accès à Internet pour assurer son bon fonctionnement avec Office 365.

Les spécifications matérielles suivantes ont été retenues :

- **Processeur** : 64 bits avec support du multi-threading.
- **Mémoire RAM** : 4 Go ou plus, selon les besoins.
- **Stockage** : Disques SSD en RAID 1 pour la fiabilité et la performance.
- **Réseau** : Carte réseau Gigabit Ethernet pour une connectivité stable.

Ces caractéristiques garantissent un environnement fiable et performant pour un serveur de messagerie avec relai SMTP.



Logiciels à télécharger

- Il est possible de télécharger n'importe quelle distribution binaire de Debian, en version stable 64 bits sur cette page internet :

<https://www.debian.org/CD/http-ftp/>

Les autres logiciels sont des logiciels que nous pouvons télécharger directement depuis les dépôts de Debian avec une ligne de commande

- **Postfix**, serveur SMTP :

Disponible directement via les dépôts Debian avec la commande :

```
# sudo apt install postfix
```

- **mailutils**, pour tester les fonctionnalités de messagerie :

Téléchargeable via les dépôts Debian avec la commande :

```
# sudo apt install mailutils
```

- **openssl**, pour la gestion des connexions sécurisées :

Inclus dans les dépôts Debian avec la commande :

```
# sudo apt install openssl
```

Tous ces logiciels sont facilement accessibles depuis les dépôts officiels de Debian pour garantir leur compatibilité et leur sécurité.

Encodage de l'environnement

Pour garantir un encodage cohérent et universel des caractères, il est recommandé que l'ensemble du système utilise l'encodage **UTF-8**. Cet encodage permet de prendre en charge un large éventail de langues et de symboles, que ce soit pour l'affichage des pages web dans les navigateurs, le stockage des données dans les bases de données MySQL, ou encore l'écriture et la lecture des fichiers texte sur le système.

À la fin de l'installation de votre système Debian, assurez-vous de configurer l'environnement pour utiliser par défaut la locale **fr_FR.UTF-8**, afin d'éviter les problèmes d'affichage ou de compatibilité liés aux caractères spéciaux.



Installation d'un serveur de messagerie sur Linux Debian

En premier temps, il faut s'assurer que le système est à jour :

```
# sudo apt update  
# sudo apt upgrade
```

Ensuite, il faut installer les paquets :

```
# apt-get install postfix libsasl2-modules
```

Lors de la configuration de Postfix, il faut choisir Site Internet et entrer son nom de domaine.

Configuration de Postfix

Pour la configuration de Postfix, elle se fait dans le fichier `/etc/postfix/main.cf`. Il est possible de trouver un fichier de configuration complet dans `/usr/share/postfix/main.cf.dist`.

En premier temps, nous allons faire une copie du fichier `/etc/postfix/main.cf` afin de garder le fichier par défaut en cas de problème.

```
# cp /etc/postfix/main.cf /etc/postfix/main.cf.1
```

Ensuite il faut aller dans le fichier de configuration afin de le modifier :

```
# nano /etc/postfix/main.cf
```



Nous allons modifier le fichier de configuration :

```
# Configuration TLS client SMTP
smtp_use_tls = yes
smtp_tls_security_level = may
smtp_tls_CAfile = /etc/ssl/certs/ca-certificates.crt

# Gestion reecriture domaine
sender_canonical_classes = envelope_sender, header_sender
sender_canonical_maps = regexp:/etc/postfix/sender_canonical_maps
smtp_header_checks = regexp:/etc/postfix/smtpl_header_check
masquerade_domains = $mydomain

# Gestion des redirections et options des boîtes
myorigin = /etc/mailname
smtpd_banner = mail.server. ESMTP alizee-lecerf
biff = no
mydomain = mailserver.alizee.
myhostname = mailserver.
mail_name = alizee-lecerf
append_dot_mydomain = yes
compatibility_level = 3.6
mydestination =
recipient_delimiter = +
mailbox_size_limit = 5242880

# Configuration relais
relayhost = [smtp.office365.com]:587

mynetworks = 127.0.0.0/8 [::ffff:127.0.0.0]/104 [::1]/128

# Configuration interfaces
inet_interfaces = loopback-only
inet_protocols = ipv4
```



Nous allons maintenant enregistrer le login et le mot de passe utilisé avec le serveur SMTP, il faut aller dans le fichier `/etc/postfix/sasl_passwd` avec la commande :

```
# nano /etc/postfix/sasl_passwd
```

Dans le fichier, il faut rentrer :

```
[smtp.office365.com]:587 alizee-lecerf@mailserver.alizee.com:Not24get
```

Il faut ensuite remplacer l'adresse d'expédition par l'adresse de login,
En premier temps dans le fichier `/etc/postfix/sender_canonical_maps` :

```
/.+/ alizee-lecerf@mailserver.alizee.com
```

Ensuite dans le fichier `/etc/postfix/header_check` :

```
/FROM:.* / REPLACE From: alizee-lecerf@mailserver.alizee.com  
/SENDER:.* / REPLACE Sender: alizee-lecerf@mailserver.alizee.com
```

On va spécifier le nom du domaine à utiliser comme origine dans le fichier `/etc/mailname` :

```
mailserver.alizee.com
```

Ensuite on demande à Postfix de prendre en compte notre nouvelle configuration :

```
# postmap /etc/postfix/sasl_passwd  
# service postfix restart
```

Test

Dans cette partie, nous allons faire des tests afin de voir si notre configuration fonctionne bien.

Pour tester il suffit de rentrer cette commande :

```
echo "test" | mailx -s "test" nomdestinataire@example.com
```

Si la configuration est correcte, alors dans le répertoire
`/var/mail/vmail/example.com/nomdestinataire/new`, un fichier mail correspondant au message
envoyé devrait être présent.



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Documents supplémentaires

Vous pouvez trouver dans cette partie des documentations supplémentaires si cela est nécessaire.

<https://antoinepernot.fr/articles/installation-mail#1>

<https://www.formatux.fr/formatux-services/module-070-postfix/index.html>

<https://perhonen.fr/blog/2016/05/configurer-postfix-avec-le-smtp-office365-2830>

<https://virtual432.wordpress.com/2017/11/22/debian-how-to-use-relay-smtp-office365-with-postfix/>



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