

CIAB Remote Desktop System Installation Guide

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IMPORTANT – If you already have LXD installed on your “server” be aware CIAB installation can install/re-install LXD and re-init LXD !

If you do NOT have LXD installed then please utilize a CIAB pre-install script and yaml config file to insure LXD is properly installed on your Server/VM/Cloud-Instance:

Open a Terminal and run:

\$ [ciab-pre-install.sh](#)

So consider only Installing CIAB on a “fresh” Ubuntu 20.04 Server, VM or Cloud Server !

Major changes:

1. CIAB now utilizes a Dockerized Guacamole container running on the Server in an “nesting enabled” LXD container which then allows the Guacamole Docker container to run inside (ie “nested”) the LXD ciab-guac container.
2. The CIAB Remote Desktop is still installed in an LXD container. As part of the Installation you will be asked to enter a “name” for the LXD Container into which a selectable Desktop Environment (DE) will be installed. Note: suggest naming the LXD container with the name of the DE you intend to install as part of the container name

Example: If you intend to create a an MATE Desktop Container then you might call the container “mate-desktop”

```
=====
Enter a name for your new LXD Desktop Container:

Hint:  if you want to create a MATE LXD Desktop then maybe name the new LXD Desktop Container "Mate-Desktop"
       and the other LXD Desktop Containers might be "KDE-Desktop" "Gnome-Desktop" etc.

Enter the name for your new LXD Desktop Container:  mate-desktop

=====
Creating the LXD Desktop Container using the name "mate-desktop" provided above.

Creating mate-desktop
Starting mate-desktop
```

NOTE: a User Account for the Installer will be created in the new LXD container and you will be prompted for the Password for that User Account.

Next, you (the CIAB Installer) will be prompted to choose which Desktop Environment (DE) to install into the Desktop Container (example: entering 4 would install the MATE DE).

```
====={ CIAB Desktop Environment Chooser }=====
Enter the Number of the Desktop Environment you want to install in CIAB.

1) KDE
2) LXDE
3) GNOME
4) MATE
5) XFCE
6) BUDGIE
7) CINNAMON
Please enter the Number for your choice of Desktop Environment to install...
```

The Installation of the CIAB Remote Desktop System is mostly automatic except when you will be prompted to enter your Sudo password for specific configuration/installation steps.

Instructions are provided in several CIAB Installation Mind Maps which will be shown on the following pages.

Please substitute the *UserName* you intend to utilize anywhere in *Part 1 and Part 2* where ever you see “*UserID*”.

Create a “work” directory:

```
$ sudo mkdir /opt/ciab
$ sudo chown $USER:$USER /opt/ciab
$ sudo chmod 766 /opt/ciab
```

The copy all of the CIAB files from Github to that directory and make the scripts executable.

Executing the CIAB Script “**mk-ciab-desktop-container.sh**” will begins installing CIAB.

Each time you run the above command you can install a new LXD Desktop Container and choose which Desktop Environment you want to install.

When the script completes it will have created a “**launcher**” script in your Home directory and copied that same script to **/usr/bin/**. **To access the Container Desktop just execute that DE’s launcher script.**

Example for “**mate-desktop**”: **\$ ~/.mate-desktop.sh**

CIAB Installation will also prompt you as to *whether you want to install CIAB's Guacamole into a separate LXD container called "ciab-gtwy"*.

If you choose to do this (you only have to do it once) then a CIAB Dockerized Guacamole/Tomcat/NGINX/PostgreSQL/Tomcat will be installed in a "nesting" enabled LXD container named "ciab-gtwy".

Following Installation of "ciab-gtwy" you can point a Web Browser at the IP Address of the Server you installed CIAB on.

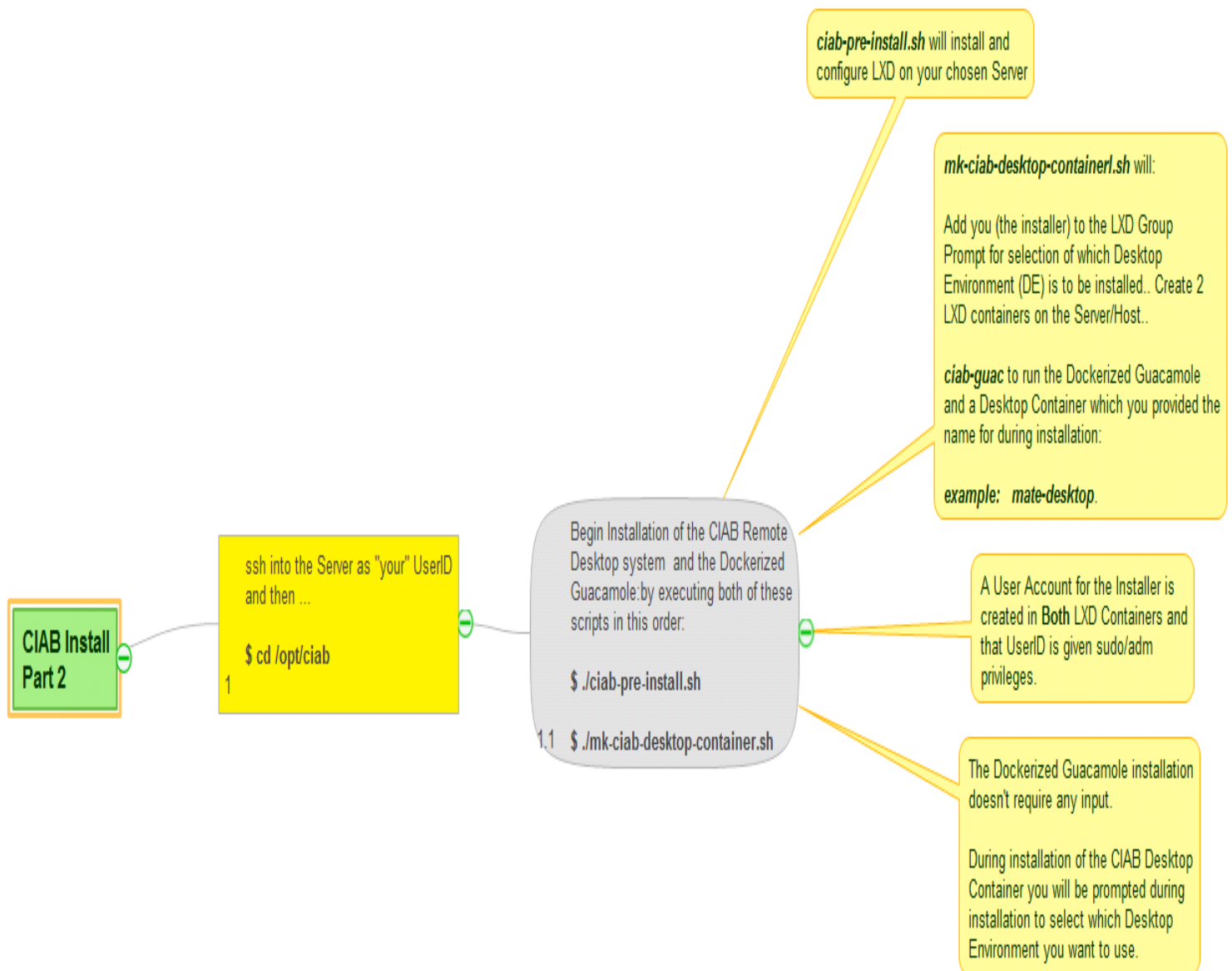
<https://A.B.C.D>

Default Admin login and password are both: guacadmin

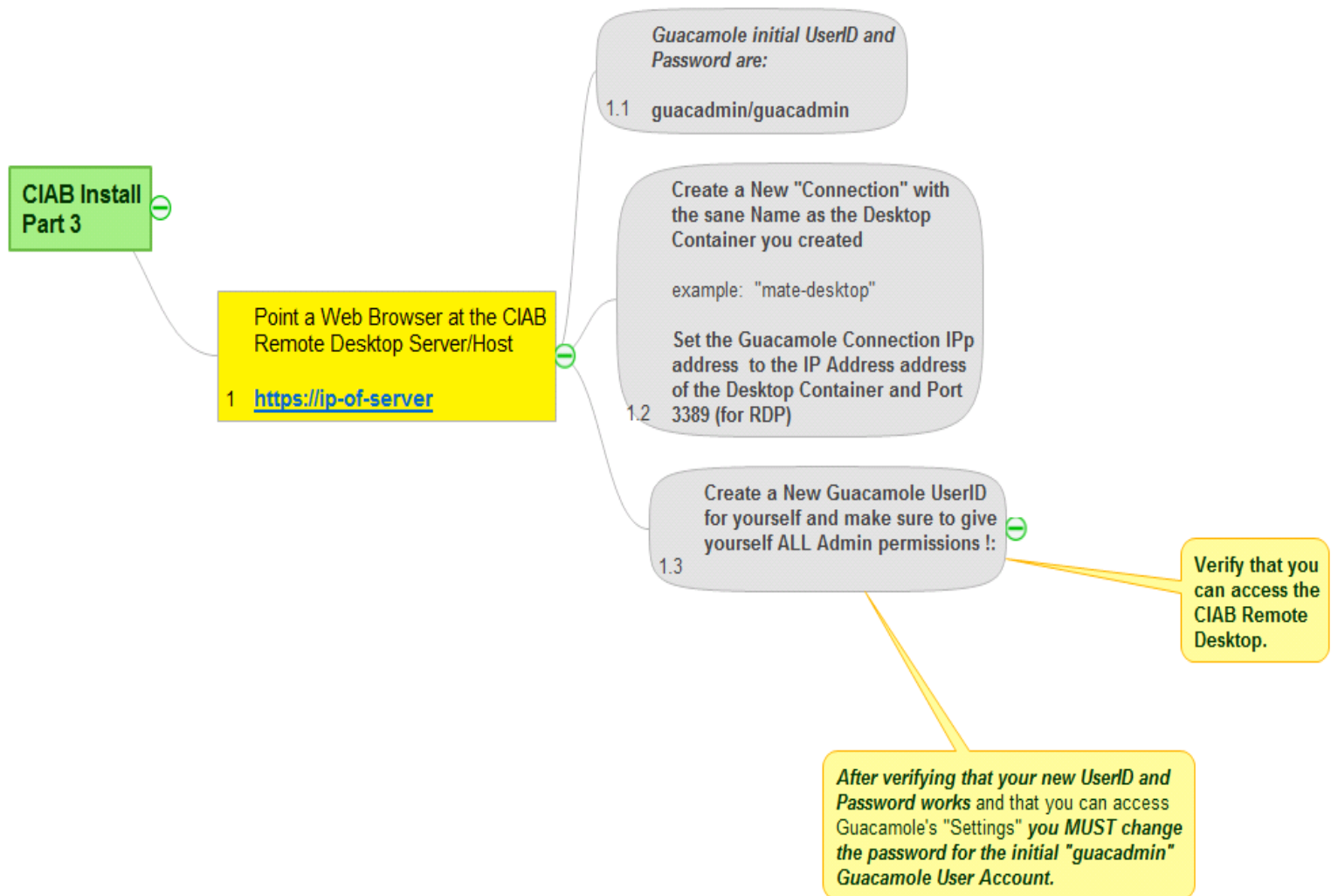
CIAB Remote Desktop System Installation – PART 1



CIAB Remote Desktop System Installation – PART 2



CIAB Remote Desktop System Installation – PART 3



Basic CIAB Guacamole Configuration Steps

Point your web browser to the IP address of your CIAB Server:

<https://X.X.X.X>

and you will see the Guacamole Login Menu:

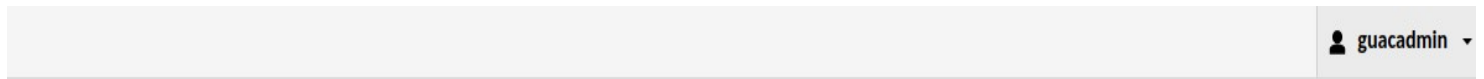


The image shows the Apache Guacamole login interface. At the top is the Guacamole logo, which consists of a black circle containing a green bowl with a yellow spoon. Below the logo, the text "APACHE GUACAMOLE" is displayed in a bold, black, sans-serif font. Underneath the text are two input fields: the first is for the username, containing a single vertical bar "|" as a placeholder, and the second is for the password, with the word "Password" as a placeholder. Both fields have a thin orange border. At the bottom of the form is a dark gray rectangular button with the word "Login" in white, bold, sans-serif font.

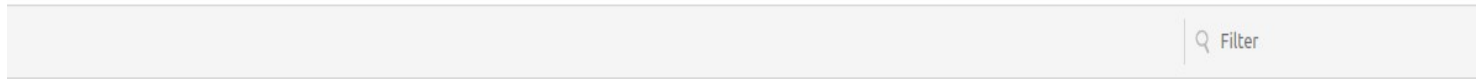
Default initial Login & Password are:

guacadmin
guacadmin

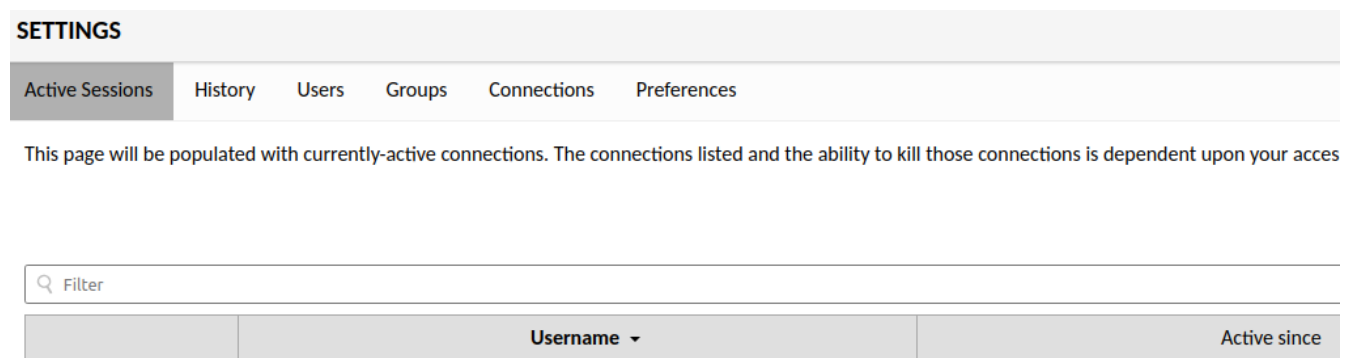
In the upper right corner of the next screen you will see:



ions.



Click on “**guacadmin**” and choose “**Settings**” and the next screen you will see is:



For basic configuration of CIAB we will show configuring a “new” Connection (ie to ciab-cn1) and a “new User.

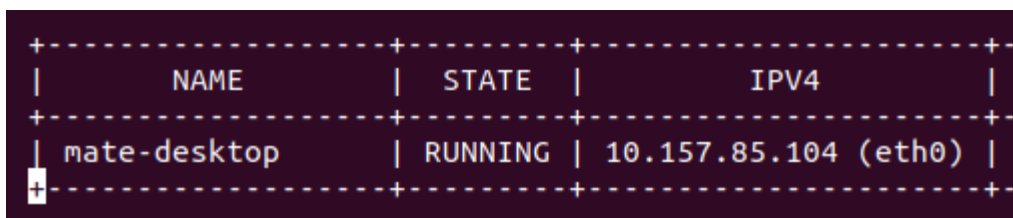
Configure a new Connection

Click on “Connections” and you will see the following screens. I will fill in the forms and take a screen shot of each so you can see what you will need to do. *The only difference will be the IP address of your LXD Desktop Container.*

Note: you can find LXD Desktop Container IP address by starting a Terminal on the Server/Host/VM and executing:

\$ lxc ls

Example: The following shows the “mate-desktop” container IPv4 address is 10.157.85.104



EDIT CONNECTION

Name:

Location:

Protocol:

CONCURRENCY LIMITS

Maximum number of connections:

Maximum number of connections per user:

LOAD BALANCING

Connection weight:

Use for failover only: ☐

GUACAMOLE PROXY PARAMETERS (GUACD)

Hostname:

Port:

Encryption:

PARAMETERS

Network

Hostname:

Port:

Authentication

Username:

Password:

Domain:

Security mode:

Disable authentication: ☐

Ignore server certificate: ☐

Remote Desktop Gateway

Hostname:	<input type="text"/>
Port:	<input type="text"/>
Username:	<input type="text"/>
Password:	<input type="password"/>
Domain:	<input type="text"/>

Basic Settings

Initial program:	<input type="text"/>
Client name:	<input type="text"/>
Keyboard layout:	<input type="text" value="US English (Qwerty)"/>
Time zone:	<input type="text" value="America"/> <input type="text" value="New York"/>
Enable multi-touch:	<input type="checkbox"/>
Administrator console:	<input type="checkbox"/>

Display

Width:	<input type="text"/>
Height:	<input type="text"/>
Resolution (DPI):	<input type="text"/>
Color depth:	<input type="text" value="True color (32-bit)"/>
Force lossless compression:	<input type="checkbox"/>
Resize method:	<input type="text"/>
Read-only:	<input type="checkbox"/>

Clipboard

Line endings:	<input type="text"/>
Disable copying from remote desktop:	<input type="checkbox"/>
Disable pasting from client:	<input type="checkbox"/>

Device Redirection

Support audio in console:	<input type="checkbox"/>
Disable audio:	<input type="checkbox"/>
Enable audio input (microphone):	<input type="checkbox"/>
Enable printing:	<input type="checkbox"/>
Redirected printer name:	<input type="text"/>
Enable drive:	<input checked="" type="checkbox"/>
Drive name:	<input type="text" value="thinclient_drives"/>
Disable file download:	<input type="checkbox"/>
Disable file upload:	<input type="checkbox"/>
Drive path:	<input type="text" value="drives/"/>
Automatically create drive:	<input checked="" type="checkbox"/>
Static channel names:	<input type="text" value="rdpdr"/>

Performance

Enable wallpaper:	<input type="checkbox"/>
Enable theming:	<input type="checkbox"/>
Enable font smoothing (ClearType):	<input type="checkbox"/>
Enable full-window drag:	<input type="checkbox"/>
Enable desktop composition (Aero):	<input type="checkbox"/>
Enable menu animations:	<input type="checkbox"/>
Disable bitmap caching:	<input type="checkbox"/>
Disable off-screen caching:	<input type="checkbox"/>
Disable glyph caching:	<input type="checkbox"/>

RemoteApp

Program:	<input type="text"/>
Working directory:	<input type="text"/>
Parameters:	<input type="text"/>

Preconnection PDU / Hyper-V

RDP source ID:	<input type="text"/>
Preconnection BLOB (VM ID):	<input type="text"/>

Screen Recording

Recording path:	<input type="text"/>
Recording name:	<input type="text"/>
Exclude graphics/streams:	<input type="checkbox"/>
Exclude mouse:	<input type="checkbox"/>
Exclude touch events:	<input type="checkbox"/>
Include key events:	<input type="checkbox"/>
Automatically create recording path:	<input type="checkbox"/>

SFTP

Enable SFTP:	<input type="checkbox"/>
Hostname:	<input type="text"/>
Port:	<input type="text"/>
Public host key (Base64):	<input type="text"/>
Username:	<input type="text"/>
Password:	<input type="password"/>
Private key:	<div><div></div></div>
Passphrase:	<input type="password"/>
File browser root directory:	<input type="text"/>
Default upload directory:	<input type="text"/>
SFTP keepalive interval:	<input type="text"/>
Disable file download:	<input type="checkbox"/>
Disable file upload:	<input type="checkbox"/>

Wake-on-LAN (WoL)

Send WoL packet:	<input type="checkbox"/>
MAC address of the remote host:	<input type="text"/>
Broadcast address for WoL packet:	<input type="text"/>
UDP port for WoL packet:	<input type="text"/>
Host boot wait time:	<input type="text"/>

Then at the bottom of the screen Click on SAVE:



Configure a New Guacamole User

NOTE: you will need to create a User Account in the CIAB Desktop Containers for each Guacamole User you create that you want to have access to that Desktop!

SETTINGS

Active SessionsHistoryUsersGroupsConnectionsPreferences

Click or tap on a user below to manage that user. Depending on your access level, users can be added and deleted, an

New User

Filter

Username ▾	
guacadmin	

Click on “Users” then click on “New User”.

IMPORTANT NOTE:

Enter the **Username** and **Password** for the New User to exactly match the User Account created for that Username in the LXD Desktop Container.

For yourself as the CIAB Installer give your Guacamole Account ALL Permissions

Make sure you check all the boxes for each Container Desktop Connection you want to access.

Finally, Click SAVE.

EDIT USER

Username:

Password:

Re-enter Password:

PROFILE

Full name:

Email address:

Organization:

Role:

ACCOUNT RESTRICTIONS

Login disabled: ☐

Password expired: ☐

Allow access after:

Do not allow access after:

Enable account after:

Disable account after:

User time zone:

PERMISSIONS

Administer system: ☒

Create new users: ☒

Create new user groups: ☒

Create new connections: ☒

Create new connection groups: ☒

Create new sharing profiles: ☒

Change own password: ☒

CONNECTIONS

Current Connections **All Connections**

- ☐ ☒ budgie-desktop
- ☐ ☒ gnome-desktop
- ☐ ☒ kde-desktop
- ☐ ☒ lxde-desktop
- ☐ ☒ mate-desktop

Back on the next Screen Click in the upper right corner on **guacadmin** again **and Select Logout**.

		guacadmin ▾
		Home
		Settings
		Logout
	Last active	
	2022-01-10 09:29:14	

Next...

Login to Guacamole with your own UserID and Password and you will see something like the following. **Clicking on either the Icon or the connection name “mate-desktop”** will log you into that CIAB Desktop Container.

RECENT CONNECTIONS



budgie-desktop



kde-desktop

ALL CONNECTIONS

- budgie-desktop
- kde-desktop
- mate-desktop