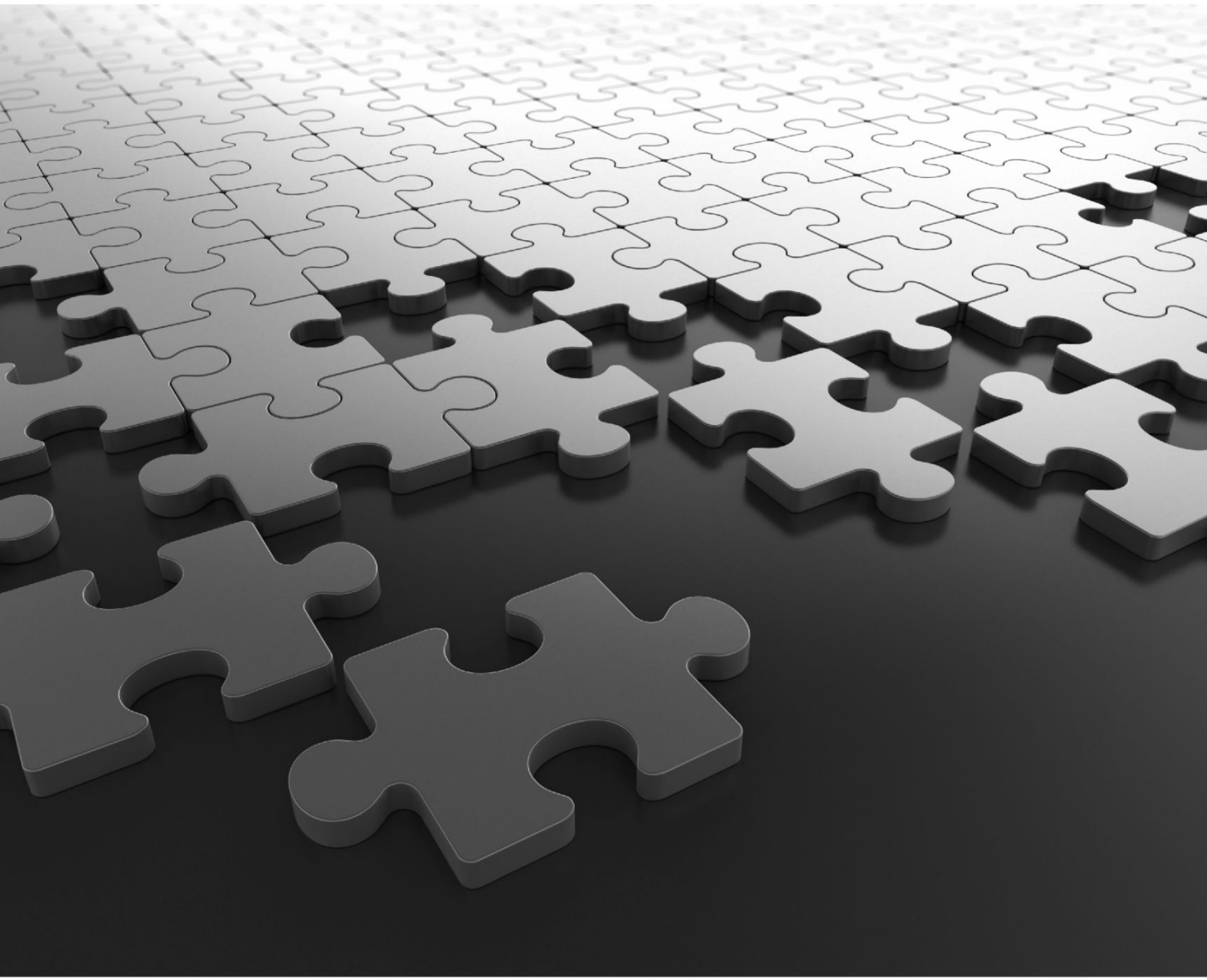
ANANT UCS
Installation Guide



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ANANT UCS

Unified Communication Server

Installation Guide

Documentation Disclaimer

Matrix Comsec reserves the right to make changes in the design or components of the product as engineering and manufacturing may warrant. Specifications are subject to change without notice.

This is a general documentation for all models of the product. The product may not support all the features and facilities described in the documentation.

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Contents

Introduction **1**

Product Overview **2**

Technical Specifications of ANANT UCS *5*

Applications of ANANT UCS *6*

ANANT UCS - A Smart Business Solution **9**

Connecting the Dell Server **11**

Installing and Deploying ANANT UCS on a Bare Machine **13**

Installing ANANT UCS on Bare Machine *14*

E-waste Management **20**

CHAPTER 1

Introduction

Welcome

Thank you for choosing MATRIX ANANT Unified Communication Server! We hope you will make optimum use of this real-time, versatile and featured packed Communication Server. Please refer this Installation Guide carefully to get acquainted with ANANT Unified Communication Server.

This guide also includes step-by-step instructions for installing and deploying ANANT UCS.

ANANT UCS Installation Guide is intended for the System Administrator, who will install and deploy ANANT.

If you have any concerns regarding the installation and deployment procedure of ANANT UCS, contact the Matrix Customer Care.

The description for the advanced configuration and the features and facilities offered by the Server is documented in **ANANT UCS System Manual**. Similarly, the guidelines and instructions for setting up and operating the Server in hotels and health care establishments is documented in **ANANT UCS Hospitality System Manual**.

You can download the documents from https://www.matrixcomsec.com/support/telecom-product-manuals/

CHAPTER 2

Product Overview

Today's dynamic enterprise environment not only requires a solution that provides seamless connectivity across the globe, but also eye's upon a solution that is apt for their diversified workforce. Moreover, the enterprises also look for a solution that provides the UC experience to both, the in-office workforce as well as the mobile workforce.

With the growing competition, round-the-clock connectivity and flexible endpoints is the need of an hour of the mobile workforce for consistent in-office and remote work experience.

This increasing need of flexible work places thrives the need for a smarter collaborative communication solution. To accomplish the collaborative need of Modern Enterprises, Matrix offers ANANT Unified Communication Server.

ANANT UCS is a Business Unified Communication that aims to bring the individuals located at diverse location, on a common communication platform for the real-time communication and collaboration.

ANANT UCS unifies all the communication networks and devices to provide individuals the flexibility of accessing the calls, messaging and voicemails from any of the devices irrespective of their location, thus making it an ideal solution for Small, Medium and Large Businesses, Hotel-Motel Industries, Hospitals, Manufacturing Units, Retail Chains and Financial Institutions.

With Collaboration and Mobility as the key aspect of ANANT UCS, we are moving a step ahead to meet the day-to-to-day communicative needs of all the modern enterprises.

Benefits of ANANT Unified Communication Server

Seamless Connectivity with the Globe: ANANT UCS allows individuals located at any geographical location to communicate and collaborative seamlessly. Individuals can use the UC features like Instant Messaging, Call Management, Smart Directory and Video Calling to connect with their remote peers.

Enhanced Proficiency and Productivity: ANANT UCS offers collaboration, communication, messaging and mobility for both Small as well as Large Enterprises, thus allowing individuals to connect with their colleagues within seconds. This allows them to work collaboratively with each other, increasing the overall proficiency and productivity of an organization.

Economical and Smart Investment: The key features like Auto Attendant, Presence, SMDR Storage with a large capacity, that normally require additional investment in most of the other brands, are in-built in ANANT.

Other Intelligent features like CLI/DDI based Routing and Dial by Name ensure efficient call management and prompt response to the callers. The advanced features like Least Cost Routing and Call Budgeting helps to reduce the communication cost and enhance the productivity. Further, the routing features like Fixed or Least Cost Routing can also be selected to route the outgoing calls.

ANANT UCS can also work as an adjunct to your existing telephony infrastructure, as a Gateway, saving the cost of equipment replacement, giving you the IP Connectivity and a host of intelligent features, thus making ANANT UCS an economical and smart investment.

Durability and Reliability: A reliable server is the key requirement of all the modern organizations and to fulfill this paramount need of the organizations, ANANT UCS supports redundancy. Redundancy is the solution to any kind of unplanned system downtime and system failures.

ANANT UCS supports redundancy between the two servers — Primary Server and Backup Server. When the Primary Server fails, the Backup Server takes over the control and becomes active, thus providing uninterrupted connectivity with the globe.

Universal Connectivity via SIP Trunking: In this diversified technological era, organizations generally seek for a communication solution with a SIP Interface. Keeping the same in mind, ANANT UCS is designed with a provision of SIP Trunking. The support of SIP Trunk Services in ANANT, allows organizations to establish universal connectivity at desired time and space**.**

Communication and Collaboration using SIP Extensions: SIP Extensions are the first and foremost choice of most of the modern organizations. To meet this requirement, ANANT UCS supports SIP Extensions. You can registered any proprietary IP Phones of Matrix (SPARSH VP330, SPARSH VP310, SPARSH VP510, SPARSH VP248) or Matrix UC Clients (VARTA WIN200, VARTA ADR100, VARTA AMP100) or Standard SIP Phones or Softphone or Analog Terminal Adapter with ANANT UCS as per your requirement.

Flexibility and Mobility: The tight integration of the enterprise features of ANANT with the Matrix UC Clients - VARTA ADR100, VARTA AMP100 and VARTA WIN200 allows the mobile workforces to connect with their colleagues across the world. The Mobile workforces can use any Wi-Fi or cellular data networks to stay connected with business communication while working from office, home or traveling.

Listed below are the important UC Features and Key Features of ANANT UCS:

UC Features

- Auto-attendant with configurable call-flow
- Presence based call controlling (make call/reject call)
- Smart Directory access using VARTA WIN200, VARTA ADR100 and VARTA AMP100 for easy and quick access to the extensions and other contacts
- Mobile and Remote workers support
- Set/View Presence
- Video Calling
- IM using VARTA WIN200, VARTA ADR100 and VARTA AMP100
- IM using third party SIP Phones/soft clients

Key Features

- Account Codes
- Auto Black List IP Address for Web access, VoIP access, etc.
- Call Billing
- Class of Service
- CLI Based Routing
- Closed User Group
- Simultaneous conferences with 3 parties
- Emergency Call Detection and Reporting
- Firmware and Configuration file upload using browser
- Internal SMDR Report buffer

- Least Cost Routing
- Logical Partitioning for restricting toll bypass
- Priority
- Syslog for Logs and Debugs
- System Activity Log
- System Fault Log
- Toll Control
- Trusted IP Address to avoid unauthorized access
- Voice Mail
- Web-based Programming, Jeeves

Technical Specifications of ANANT UCS

Server Resources	Capacity
SIP Extensions	5000
SIP Trunks	99
Maximum DRTP/ RTP Relay Audio Calls	1024
Maximum DRTP/ RTP Relay Video Calls	102
Maximum 3-Party Conference	512
Maximum Conference Participants (system wide)	1536
Maximum Participants in single Multiparty Conference	64
Audio Codecs	G.729, G.711 u-Law, G.711 A-Law, iLBC - 30 ms, iLBC - 20ms, G.722
Supported IETF RFCs	3261, 3262, 3389, 3550, 3551, 3311, 3265, 4733, 2915, 2916, 2327, 2833, 2806, 768, 793, 1034
Network Protocols	IPv6, IPv4, TCP, UDP, SNTP, STUN, ARP, ICMP, PPP, DNS, SMTP
VoIP Quality of Service	Support of Layer 2/3 CoS/QoS for SIP Support of Layer 3 QoS for RTP
Security	SRTP/TLS over SIP, MD5 Authentication for SIP Password encrypted with AES128 algorithm in configuration files
Configuration	Web Based Intuitive GUI, Jeeves

Server Resources	Capacity
Manufacturer	Dell
Processor	Intel Xeon E2134
CPU Speed	3.5 GHz
CPU Core/Thread	4/8
RAM	4 GB
Hard Disk	1 TB
NIC	2 NICs with 1 Gbps
Hyper Threading	Enabled
Maximum Transcoding Calls (Without SRTP)	
G.711 a/u Law	1024
G.729	308
G.722	84
iLBC 20msec	231
iLBC 30msec	213
Maximum Transcoding Calls (With SRTP)	
G.711 a/u Law	1024
G.729	292
G.722	80
iLBC 20msec	219
iLBC 30msec	202
One video call is equivalent to ten audio calls. *The call capacity may vary depending on the system configuration and system load.*	

Applications of ANANT UCS

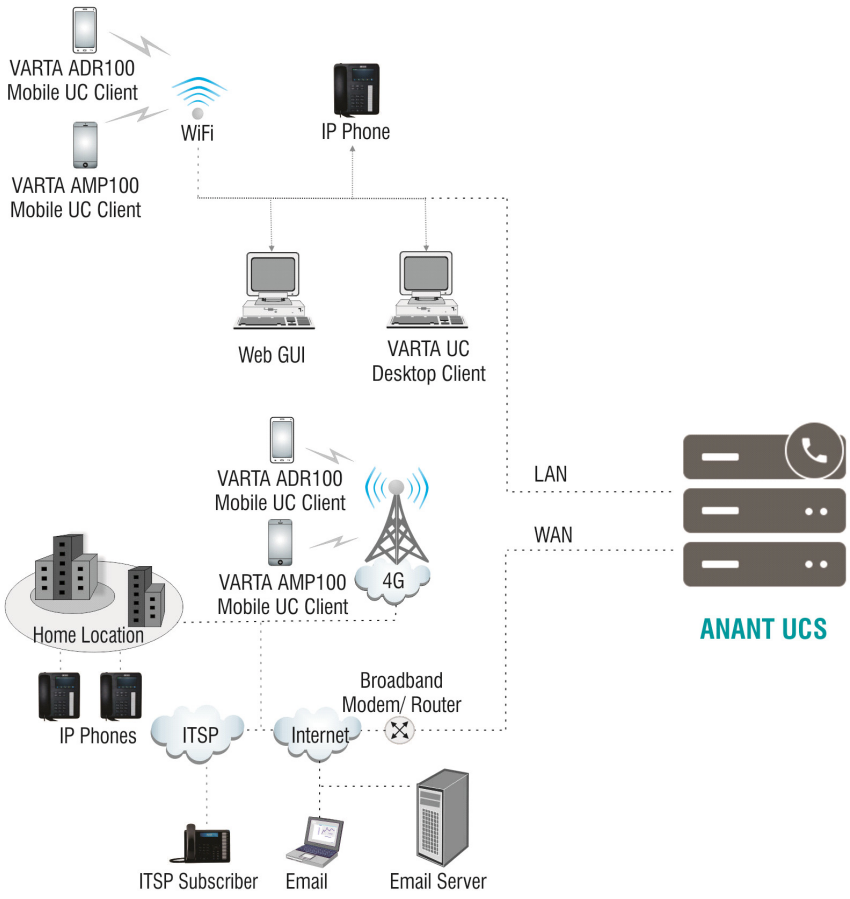
ANANT UCS can be deployed in almost all the enterprises such as Finance, Retail, Hospitality, Healthcare, Education and other small and medium organizations.

Illustrated below are the various scenarios where ANANT UCS finds application.

Enterprise Application

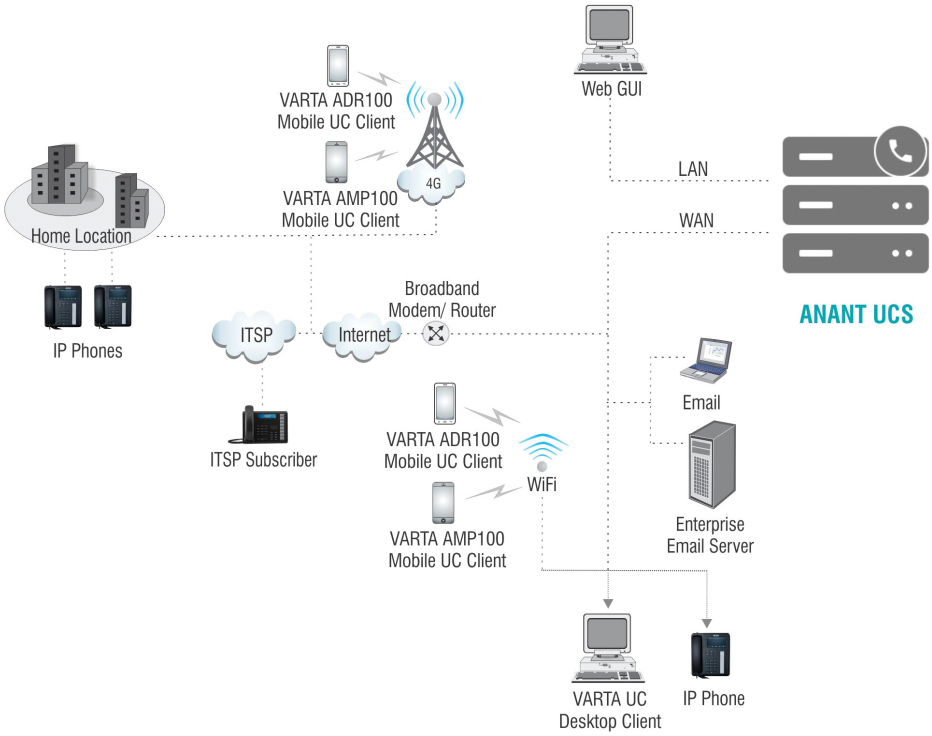
UC Applications

When connecting the WAN Port of ANANT UCS to the Public IP Network



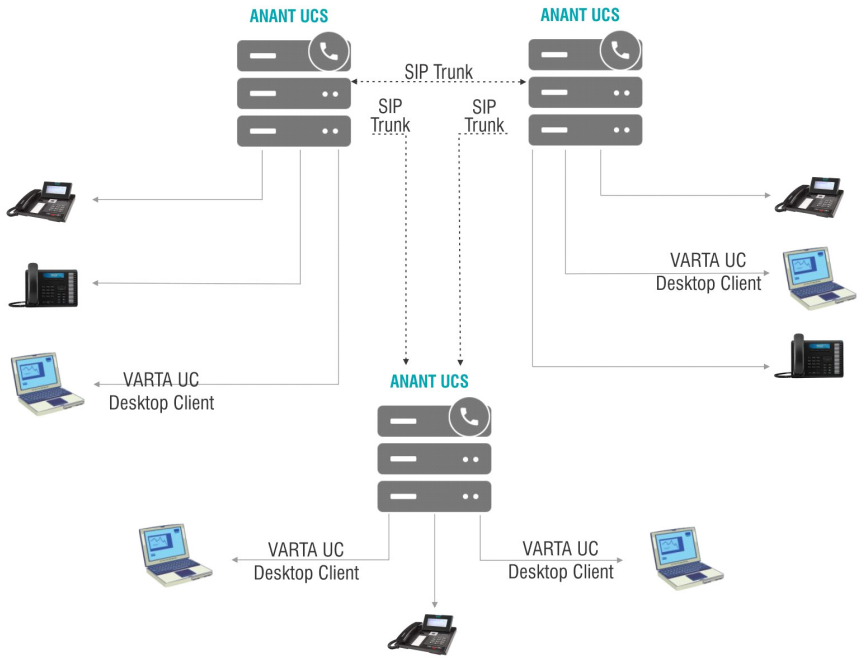
Connecting ANANT UCS to the Public IP Network

When connecting the WAN Port of ANANT UCS to the Private IP Network



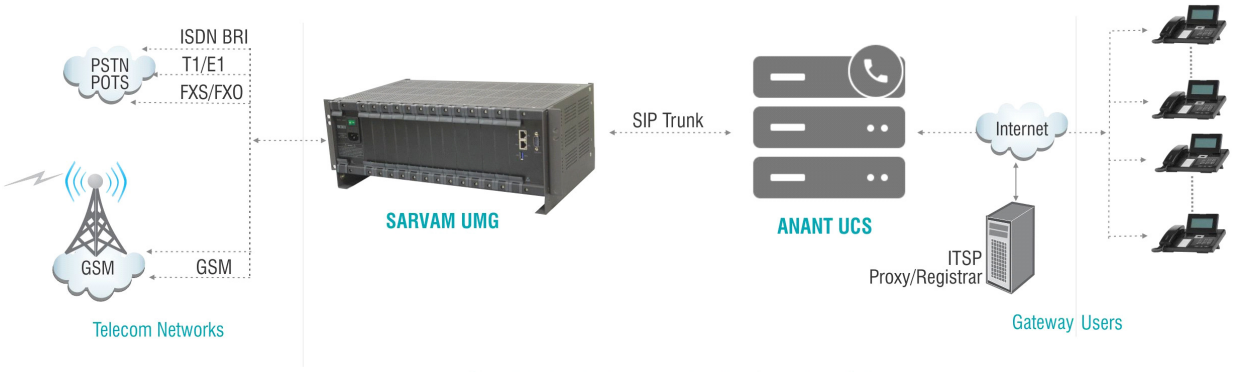
Connecting ANANT UCS to the Private IP Network

Closed User Group Application



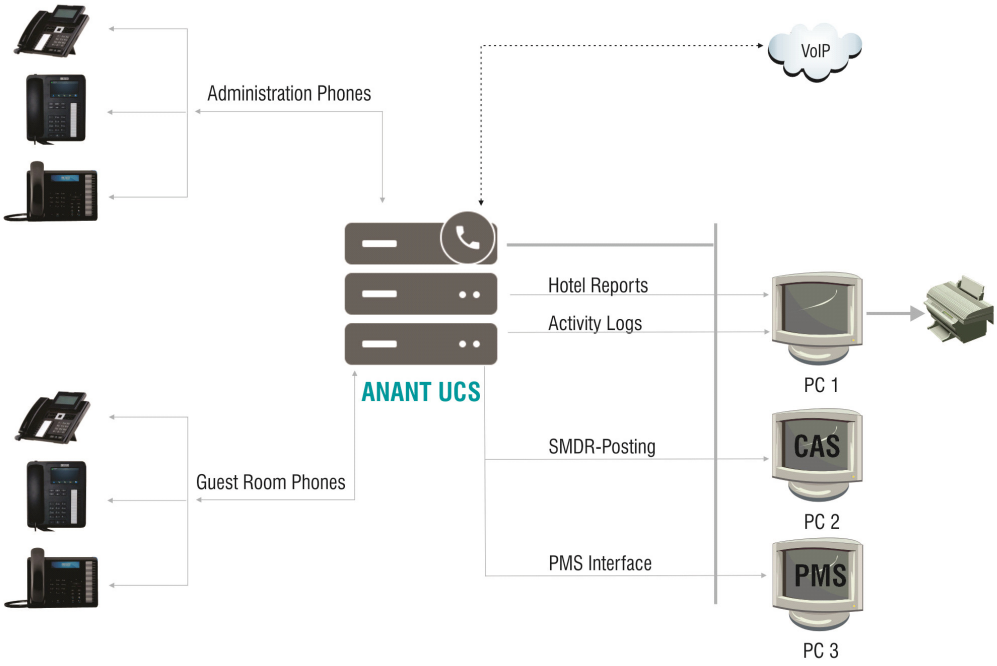
Closed User Group Application

Gateway Application for ITSP



ANANT UCS- Gateway Application for ITSP

Hotel/ Hospital Application



CHAPTER 3

ANANT UCS - A Smart Business Solution

In today's era, the technological need of organizations are no longer similar. The business solutions required by a Small Medium Enterprise are different from that of a Large Enterprise. So, most of the modern organizations want to invest in an economical business solution that accomplishes their specific technological needs.

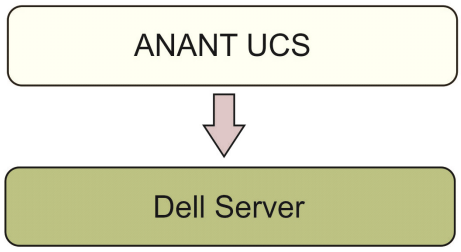
Keeping in mind, the economical aspect as well as the technological need of each and every organization, we offer ANANT Unified Communication Server in two different form of solutions. With ANANT, we are moving a step ahead, by catering to the day-to-day business need of almost all the modern organizations.

Matrix offers ANANT Unified Communication Server as:

- Integrated Hardware and Software Solution
- Software Solution

You can purchase any of the above listed solutions as per your organizational needs.

Integrated Hardware and Software Solution



Integrated Hardware and Software Solution consists of ANANT Unified Communication Server and Dell Server. The ANANT UCS application is pre-installed on the Dell Server. This perfect combination of a software application with a hardware platform, fulfills the business need of almost all the modern organizations.

This solution is beneficial for the organizations, that want to invest in both their hardware as well as Software needs.

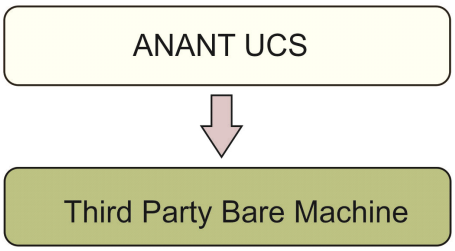
You can access the ANANT UCS Application by simply connecting the Dell Server in your organization. To know how to connect the server in your network and access the application, refer to "Connecting the Dell Server".

The solution supports the Raid1 and Raid 5 functionality.

To know more about Raid and Dell Server, scan the Quick Resource Located printed on the *Getting Started Guide* shipped with the product. You can also refer to: https://i.dell.com/sites/csdocuments/Product_Docs/en/poweredge-r240-technical-guide.pdf

If you have any queries regarding the warrant, support, repair and maintenance of the Matrix provided Dell Server, contact the Matrix Technical Support Team.

Software Solution



Software Solution includes only the ANANT Unified Communication Server application. This solution is beneficial for the organizations, that already have the required hardware platform for installing ANANT UCS.

The solution provides the flexibility to install the application on a pre-purchased Bare Machine. To know how to install the application on a Bare machine, refer to “Installing and Deploying ANANT UCS on a Bare Machine”.

CHAPTER 4

Connecting the Dell Server

When you purchase the Integrated Hardware and Software Solution, a Dell Server will be provided with pre-installed ANANT UCS application. This section includes the step-by-step instructions for connecting the Server in your network and accessing the ANANT UCS application.

Getting Started

Before you begin, make sure you follow the safety instructions listed in the Safety, Environmental, and Regulatory Information document shipped with the Server.

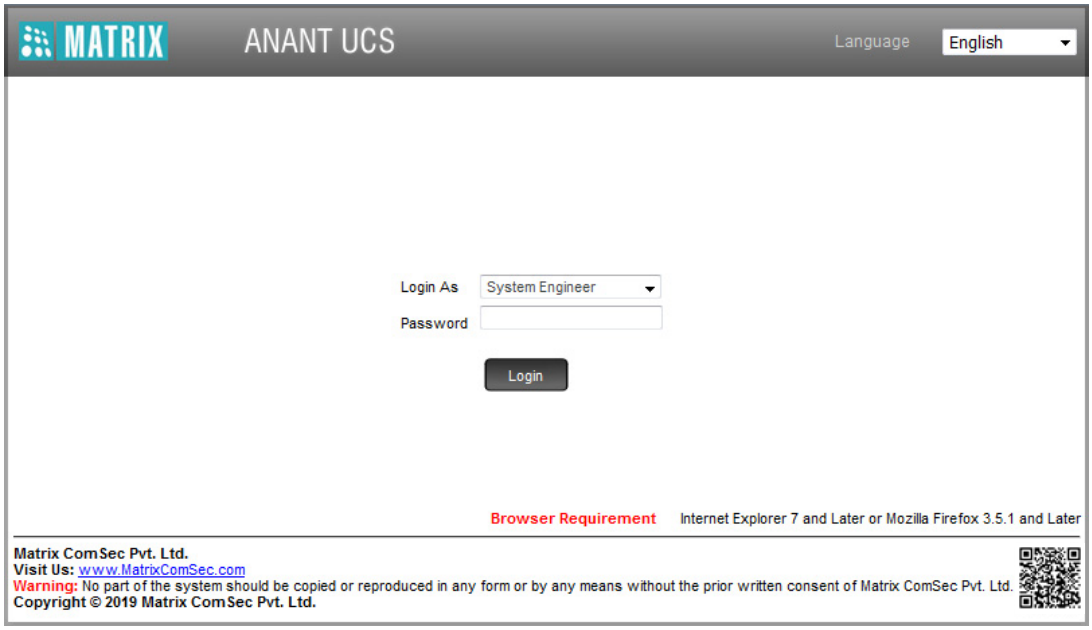
Setting up the Server

To know how to install the server in a rack, refer to the *Rack Installation Instructions* included in the Rack Solution box.

After installation the server in the rack, follow the steps listed below:

- Connect the **NIC port (Gb1)** of the server with a stand-alone PC or in a LAN.
- Connect the License Dongle and the other required I/O devices in the **USB Port** . To know more about the License Dongle, refer to the section *Licenses Supported in ANANT UCS* in ANANT UCS System Manual.
- Connect the server to a Power Source.
- Secure the power cable in the power cable retention clip.
- Turn on the Server.
- Now, open the browser (Internet Explorer/Mozilla Firefox) on the PC (Standalone or LAN PC) to which the Server is connected.

- Enter the default IP address 192.168.1.100 of ANANT UCS in the address bar of the browser. The Login Page of ANANT UCS opens.



  You can now configure all the features and facilities of ANANT UCS as per your requirement. You must also activate all the required licenses as per your requirement. To know how to configure the features and activate the licenses, refer to ANANT UCS System Manual.

  To view or download the ANANT UCS System Manual, scan the QR code present in the login page of Jeeves.

Product Registration and Warranty

For product registration and warranty,

- please visit, https://www.dell.com/support/assets-transfer/in/en/inbsd1#/Identify to transfer the warranty and ownership of the Dell Server.

- please visit, https://www.dell.com/support/assets-online/in/en/inbsd1/registration#/identifyservicetag to register the server, after your request for transferring the warranty and ownership is processed successfully.

Service and Repair

Do not contact Dell for service. If the server is purchased from MATRIX, customer's first point of contact should be MATRIX. All support, warranty, repair and maintenance must be scheduled through MATRIX. MATRIX will contact Dell to assist as required.

Service and repair of consumable accessories and cables are not covered under maintenance. Customers must purchase these items.

MATRIX strongly recommends that all servers are protected with an uninterruptable Power Supply for power surge and interruption protection. MATRIX is not responsible for server that is damaged by power surges, brownouts or blackouts.

CHAPTER 5

Installing and Deploying ANANT UCS on a Bare Machine

When you purchase the Software Solution, you will be provided only with the ANANT ISO Image. You can install the ANANT ISO Image on a Bare Machine. The ISO Image contains the necessary files for installing ANANT.

The Channel Partners can download the ISO Image from https://wiki.matrixcomsec.com/index.php?title=Software_Releases_-_Telecom_Products. Contact your respective Channel Partner or Matrix Technical Support Team for more information.

To know the specifications of the Bare Machine on which ANANT UCS can be installed, contact Matrix Technical Support Team.

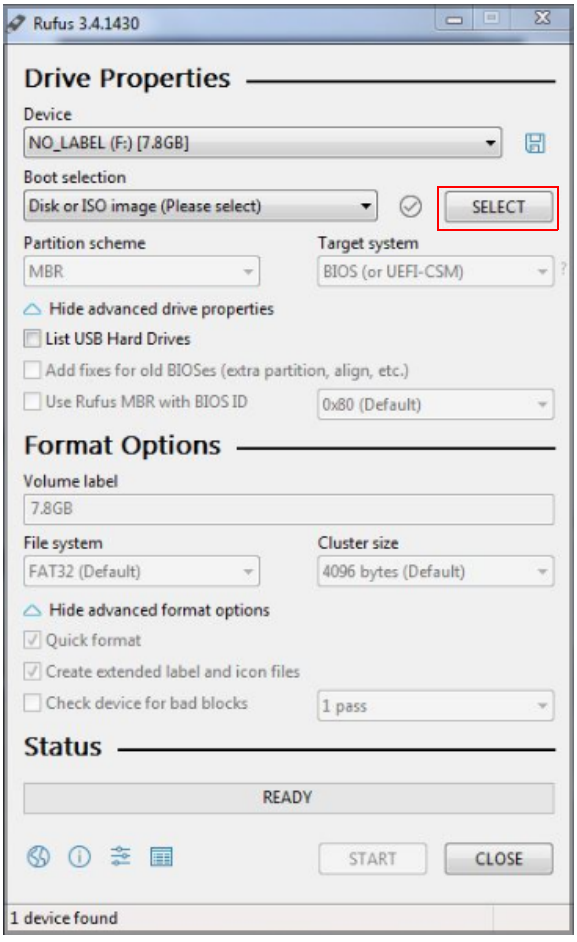
After downloading the ANANT ISO Image and selecting the specified Bare Machine, you can now install ANANT. To know the detailed procedure, refer to “Installing ANANT UCS on Bare Machine”.

Installing ANANT UCS on Bare Machine

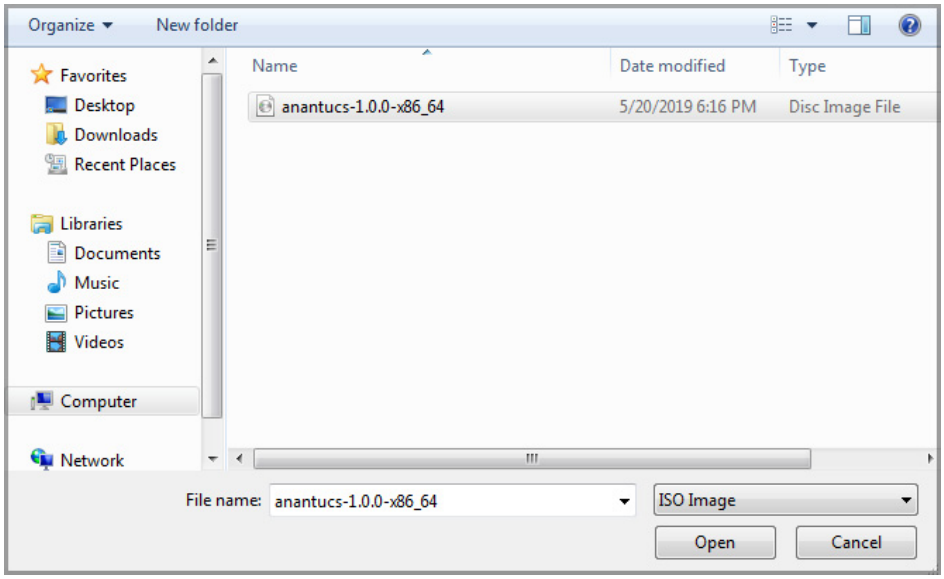
ANANT can be installed on a Bare Machine by creating a bootable USB Drive or a DVD Drive from an ISO Image. The ISO Image contains the necessary files for installing ANANT. These files need to be copied to the USB/DVD using a Bootable Tool, so that a bootable USB/DVD is created.

Follow the below steps for installing ANANT on a Bare Machine by creating a bootable USB

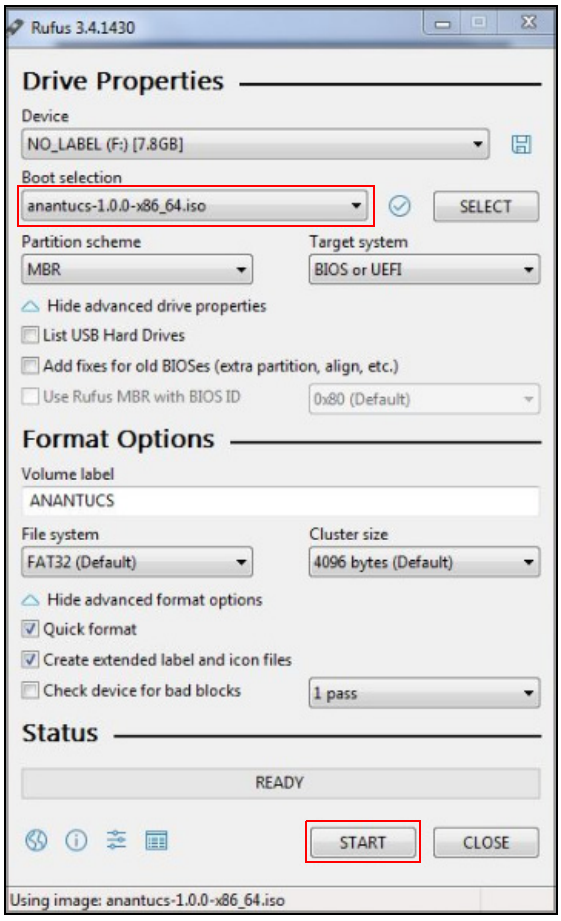
- Connect a USB in the USB Drive of your computer.
- Download **Rufus** and click **Rufus** from the list of softwares in your PC. The **Rufus** window opens.
- Under **Drive Properties**, click the **Select** option.



- Now, select the ANANT ISO Image from the local disk on your computer and click **Open**.

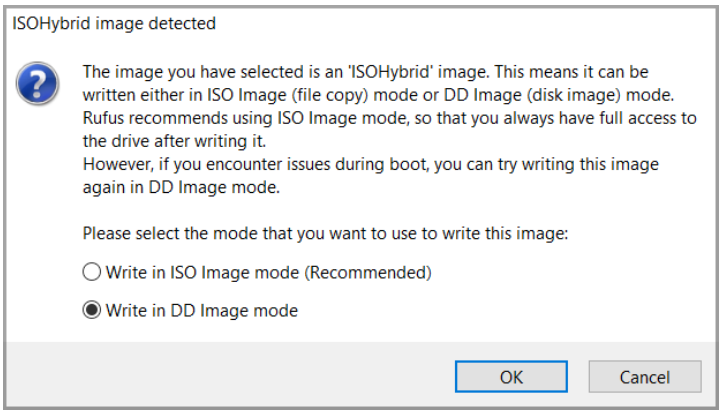


- The selected file name appears in **Boot selection**.



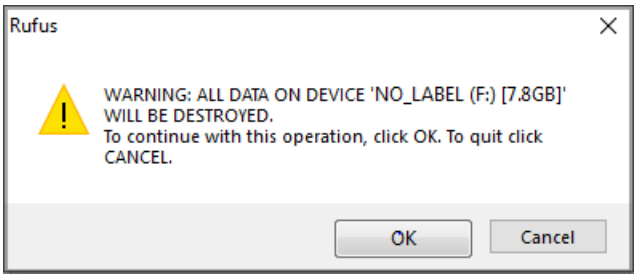
- Under **Status**, click the **Start** option.

The ISOHybrid image detected window opens.

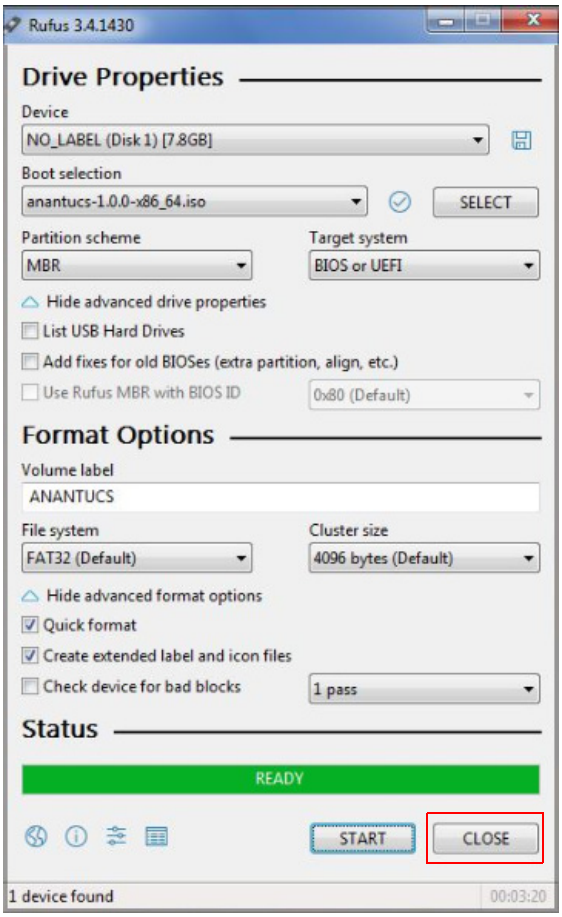


- Select the **Write in DD Image mode** radio box.
- Click **OK**.

  A Rufus warning window opens.



- Click **OK**. The files in the ISO Image are copied to the USB Drive.



- After the process is completed, click **Close**.

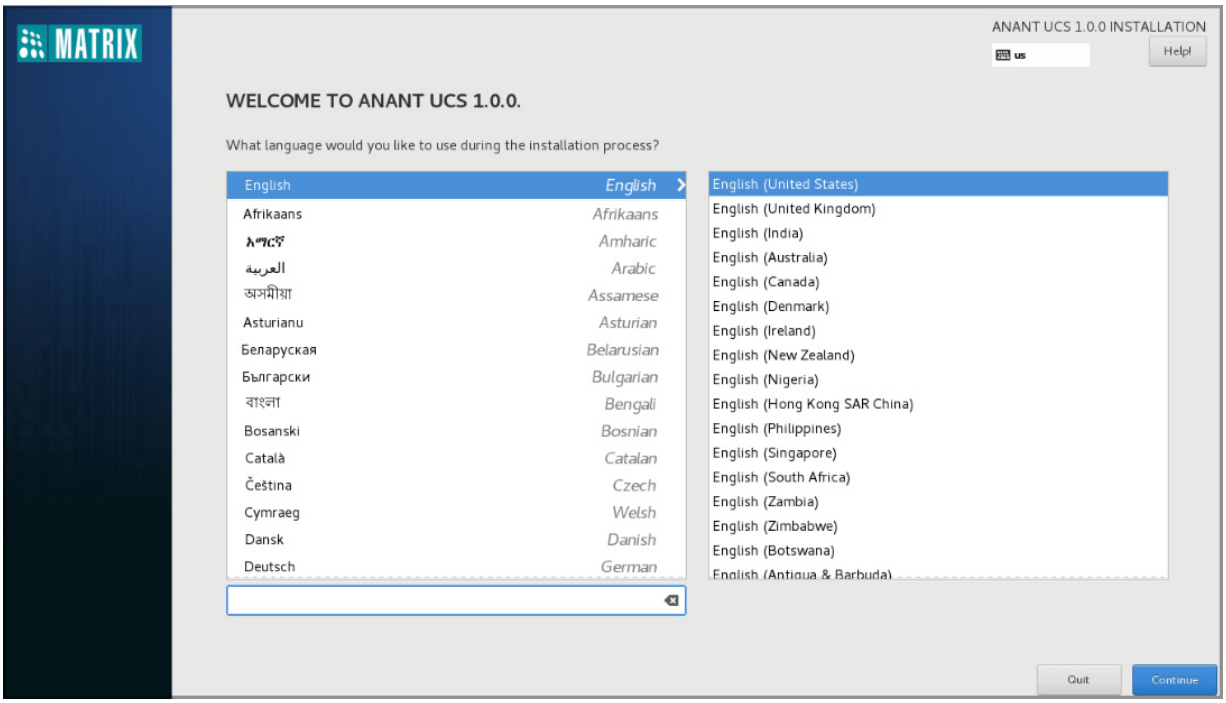
  After creating a bootable USB, remove the USB from the USB Drive and connect this USB to the Bare Machine where you want to install ANANT.

  Now, power on the Bare Machine to start the installation process.

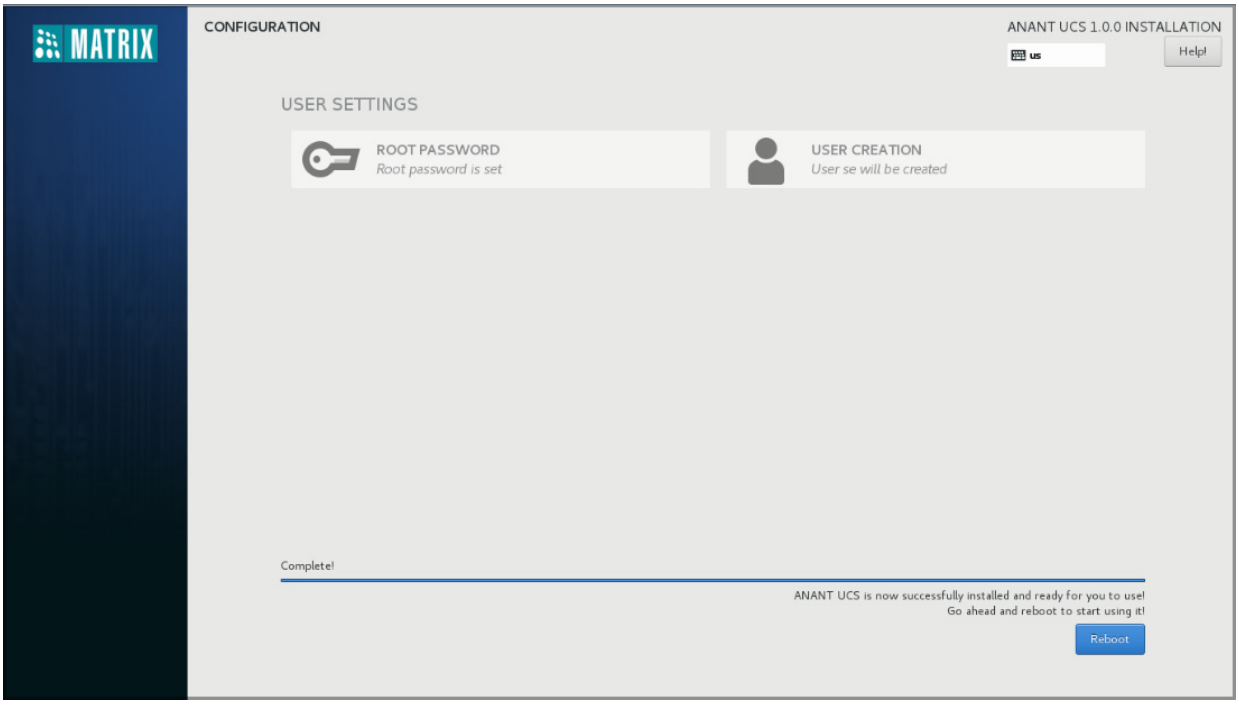
- *Before starting the installation process, make sure USB is selected as the preferred Boot option in the BIOS of the Bare Machine.*

- *It is recommended to set the Boot Mode of the Bare Machine as the Legacy BIOS Mode instead of UEFI Mode to avoid the installation issues.*

After completion of the entire process, the Installation Wizard opens. Navigate through the wizard performing the steps given below:



- Select the desired language for the installation procedure.
- Click **Continue**.
- The Configuration window opens and the Installation procedure begins.

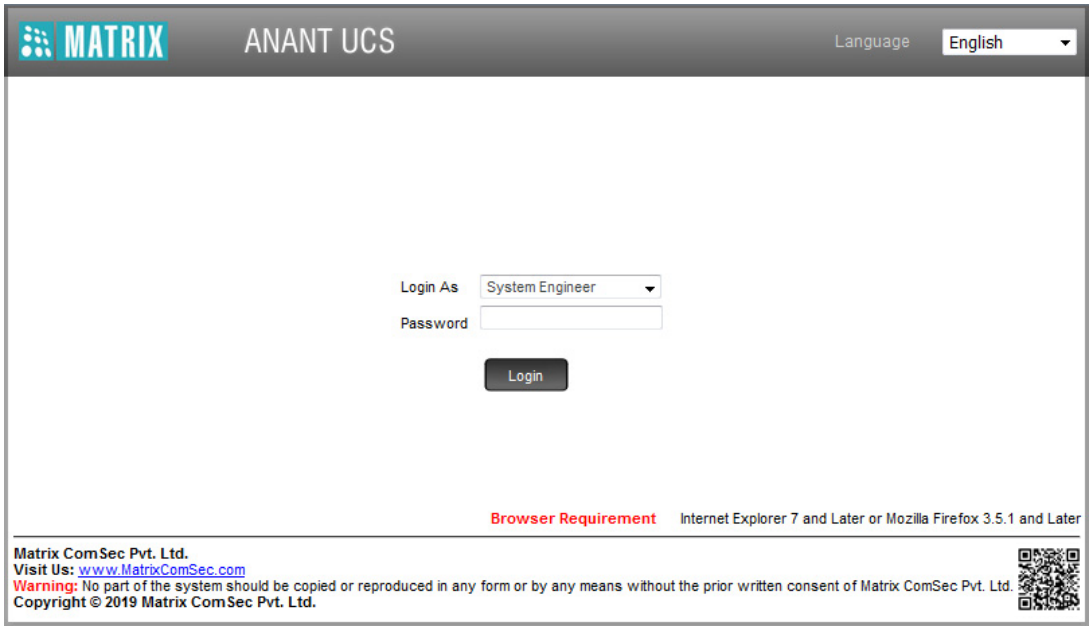


- After the completion of the Installation procedure, click **Reboot**.

After clicking Reboot, make sure you remove the USB from the Bare Machine.

The ANANT UCS is successfully installed on the Bare Machine.

- Now, open the browser (Internet Explorer/Mozilla Firefox) on the PC (Standalone or LAN PC) to which the bare machine is connected.
- Enter the default IP address 192.168.1.100 of ANANT UCS in the address bar of the browser. The Login Page of ANANT UCS opens.



You can now configure all the features and facilities of ANANT UCS. You must also activate all the required licenses as per your requirement. To know how to configure the features and activate the licenses, refer to ANANT UCS System Manual.

To view or download the ANANT UCS System Manual, scan the QR code present in the login page of Jeeves.

E-waste Management

Disposal of Server/Components after End-Of-Life

If you have purchase the Integrated Hardware and Software Solution from Matrix, you must dispose the Server safely. To know more refer to, www.dell.com/recycle

“SAVE ENVIRONMENT SAVE EARTH”

MATRIX COMSEC

Head Office
394-GIDC, Makarpura, Vadodara - 390010, India.
Ph:(+91)1800-258-7747
E-mail: Customer.Care@MatrixComSec.com

www.MatrixComSec.com

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