

2N IP Verso Configuration Guide for Brivo Access

This manual provides instructions to integrate 2N IP Verso intercoms with Brivo Access to enable automatic intercom directory updates from Brivo Access and to unlock Access controlled doors from Verso intercom DTMF codes.

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Introduction

Prerequisites

The following items are the minimum requirements for proper operation with Brivo Access.

A thorough understanding of all system components is essential for proper setup and configuration of the 2N IP Verso. It is highly recommended that you review the listed documents below before any programming of the connected systems is performed.

1. 2N IP Verso Base Station
2. 2N IP Verso Touch Display (Part Number 9155101)
3. 2N IP Verso enhanced integration license (Part Number 01378-001 or 01380-001)
4. Brivo control panel(s) with valid reader subscription
5. Brivo intercom subscription (B-OA-2N-0)
6. SIP telephone subscription
7. Axis 2N IP Verso Modular IP Intercom Installation Manual (Specifically, the intercom configuration section of the 2N Verso configuration manual found at www.2nusa.com.)
8. Brivo Control Panel Installation Guide
9. Optional 2N Security Relay Part Number 01379-001

Glossary

The following is a list of terms used within this document.

ACT	Audio Configuration Tool
DTMF	Dual Tone Multiple Frequency - transmits telephone keypad numbers during a phone call
Guest	A person who selects a user from the intercom touch display to initiate a call to the user
IP	Internet Protocol
MAC Address	Media Access Control - a unique hardware identifier
SIP	Session Initiation Protocol - enables the intercom to initiate telephone calls over an IP network
Switch Code	A 4 digit numeric code entered by the user during an intercom call to trigger a door unlock
User	A person who is displayed on the intercom touch display and receives phone calls from the intercom
User Directory	Users displayed on the 2N IP Verso touch display

Operational Overview

Brivo Access enables automatic intercom directory updates to 2N IP Verso intercoms to reliably update users displayed on the intercom touch display. Brivo Access administrators can configure which Access users are displayed, their display names, the phone number(s) the intercom calls to contact the selected user, and the switch code entered by the user to unlock the door.

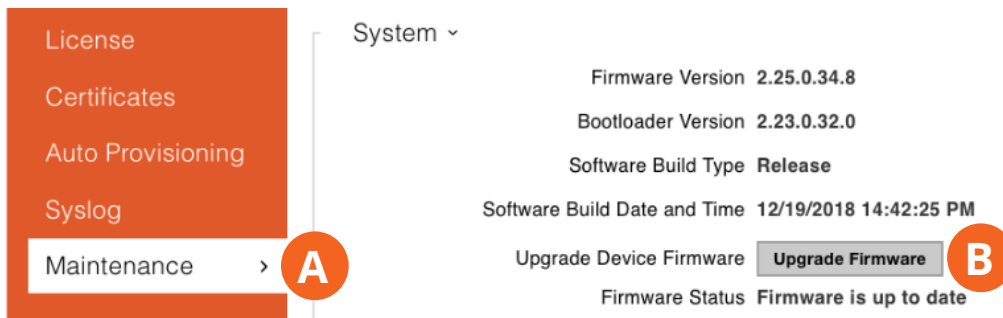
- Brivo Access administrators configure one or more phone numbers for users displayed on the Verso touch display.
- Access administrators add users to an Access user group that will be displayed on the Verso directory.
- Access administrators configure the display name with a flexible combination of first and last name, and custom fields like department name.
- Access creates a user directory file for each intercom.
- The 2N IP Verso downloads this configuration file on an hourly, daily, weekly or monthly basis.
- A guest selects a user from the touch display.
- The 2N IP Verso places a SIP telephone call to the first number provided by Brivo Access.
- The user answers the phone.
- The user may enter a 4 digit code on their telephone to unlock the door.
- The 2N IP Verso relay output signals to the Brivo panel to unlock the door.

Installation

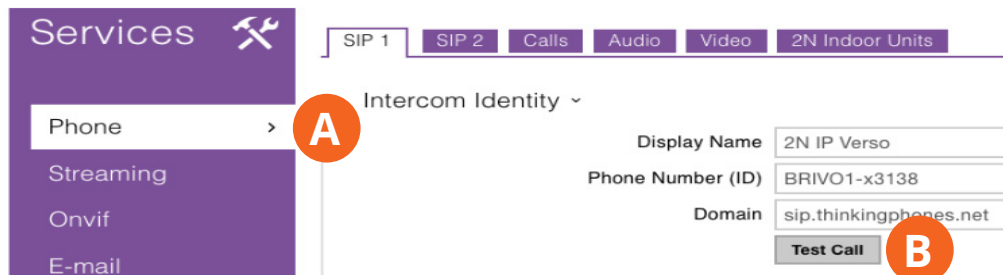
Mandatory Intercom Preparation

To prepare a 2N IP Verso for integration with Brivo Access, follow these steps:

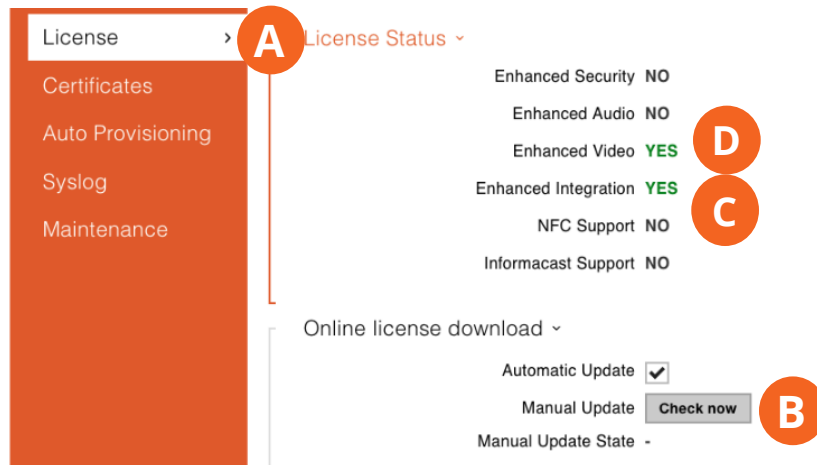
- A. Install a 2N IP Verso base station with optional touch display part number 01275-001. Optionally, a 2N Security Relay module (part number 01386-001) can be included between the 2N IP Verso and the Brivo control panel.
- B. Upgrade the 2N IP Verso Intercom Unit to the latest firmware version. A minimum of version 2.24 is required. From the Dashboard, click on the System tile and then the Maintenance tab (A) to access the Upgrade Firmware button (B) to begin the firmware upgrade process.



- C. Configure the intercom for an SIP service and confirm operation by verifying two-way audio with a phone per the 2N IP Verso manual. From the Dashboard, click on the Services tile and then the Phone tab (A) to access the Test Call button (B).



- D. Purchase and install one 01378 or 01380 enhanced integration license. From the Dashboard, click on the Services tile and then the License tab (A).
 - a. Press the Check Now button (B) to download and install the most recent license.
 - b. Enhanced integration (C) must be enabled to automatically download intercom directory lists from Brivo Access.
 - c. Enhanced video (D) integration is required for camera integration with Eagle Eye Networks.



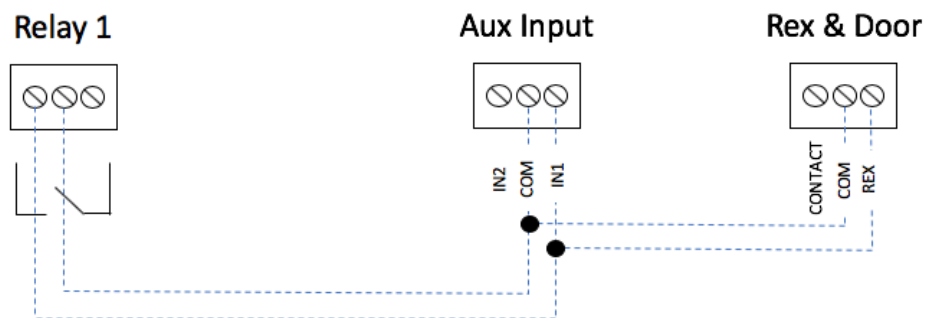
- E. Write down the MAC address of each intercom for use in the Brivo Access integration. The MAC address can usually be found on the back of the 2N IP Verso unit.

Wiring for Door Release

Standard Door Unlock Interface for the 2N IP Verso unit.

2N IP Verso Box Unit

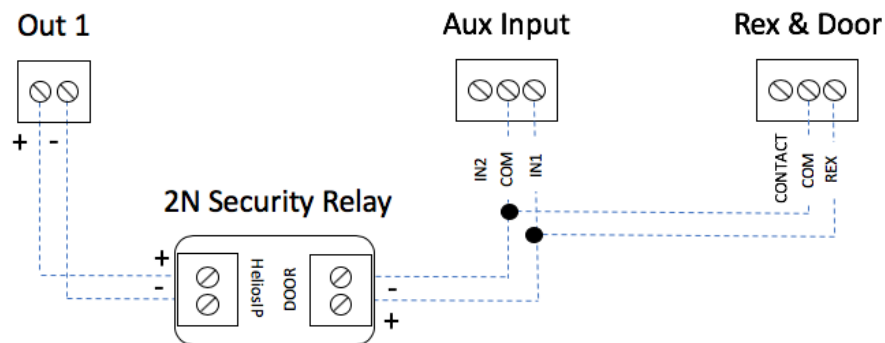
ACS300/ACS6000



High Security Door Unlock Interface for the 2N IP Verso unit.

2N IP Verso Box Unit

ACS300/ACS6000



Brivo Access Lock Configuration

Three door modifications are needed to properly unlock the door. Set the Use Request-to-Exit to Yes (A), set Rex Unlock to Yes (B) and set Use Alarm Shunt to No (C). After making the necessary adjustments, click Save Door (D) to save the changes made.

EDIT DOOR

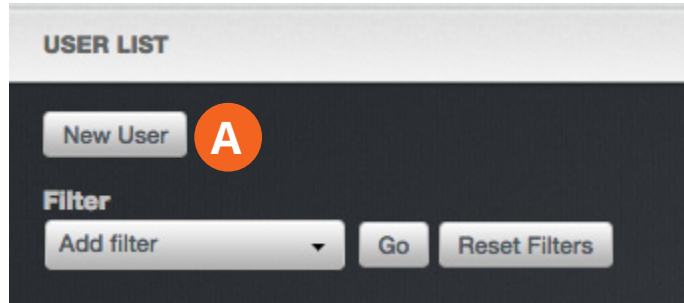
Door Name	Front Lobby	
Reader Interface	Wiegand	
Bluetooth Reader ID		
Door Ajar Enabled	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Door Ajar Threshold	120	seconds (30-600)
Invalid PINs Threshold	3	attempts (1-10)
Invalid PINs Shutdown	120	seconds (10-600)
Pass-through Period	5	seconds (1-600)
Debounce Period	0	seconds (0-255)
Use Lock-on-open	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Lock-on-open Delay	0	milliseconds (0-500)
Use Request-to-Exit	<input checked="" type="radio"/> Yes <input type="radio"/> No A	
Rex Unlock	<input checked="" type="radio"/> Yes <input type="radio"/> No B	
Maximum REX Extension	0	milliseconds (0-60000)
In/Out	<input type="radio"/> In <input type="radio"/> Out <input checked="" type="radio"/> Neither	
Door Unlock Schedule	None	
Two Factor Schedule	None	
Two Factor Interval	3	seconds (3-60)
Card Required Schedule	None	
Use Alarm Shunt	<input type="radio"/> Yes <input checked="" type="radio"/> No C	
Alarm Shunt Duration	1	seconds (1-240)
Control from Browser	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Cancel Save Door D		

Note: It is recommended to rename this input to a name like "Intercom Unlock" which provides a meaningful description in the Brivo Access event logs.

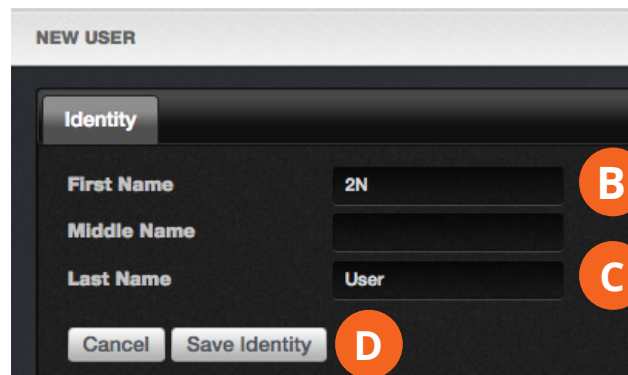
User Configuration

Note: Before creating users in Brivo Access to add to the 2N IP Verso Intercom directory, you MUST already have (or need to create) a single group in Brivo Access that all of these users will belong to (like Front Lobby Intercom Group).

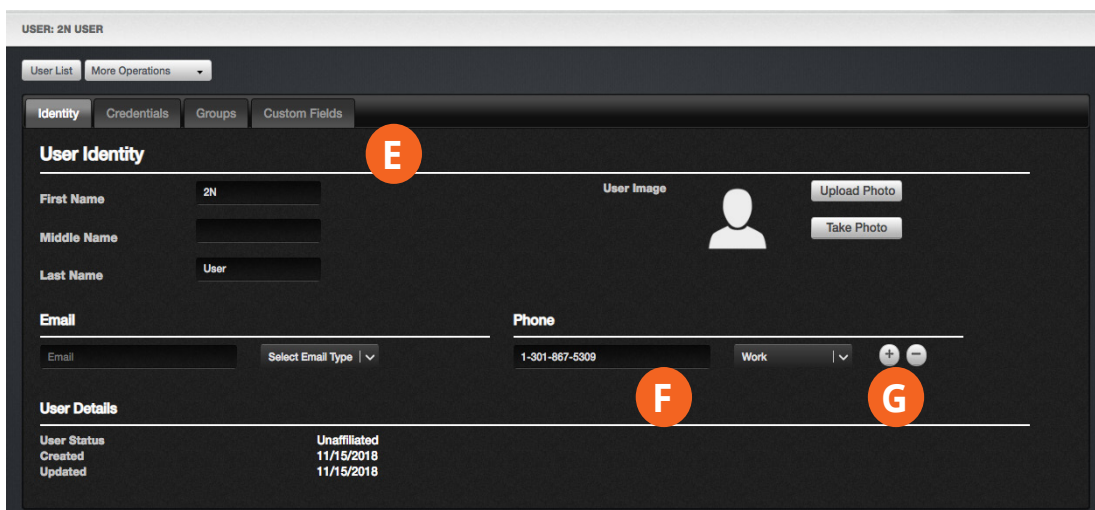
From the Users tab, click on Users and User List page will display. Click the New User button (A). The Identity tab of the New User page displays.



Enter the First Name (B), Middle Name (optional), and Last Name (C) of the New User and then click on the Save Identity button (D).



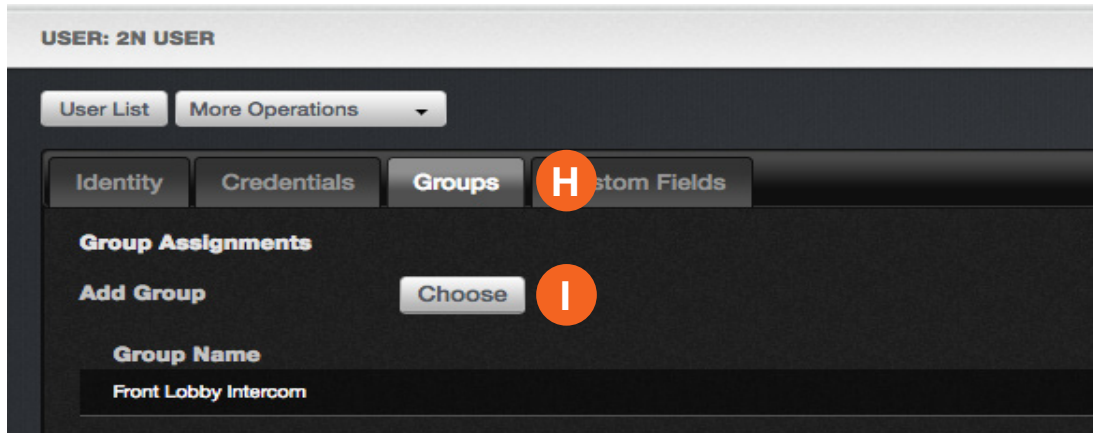
On the User Identity tab, optionally enter one custom field (E) (such as department name) that should appear on the directory user list, enter the phone number in the Phone field (F) and select the phone type (G) from the dropdown menu.



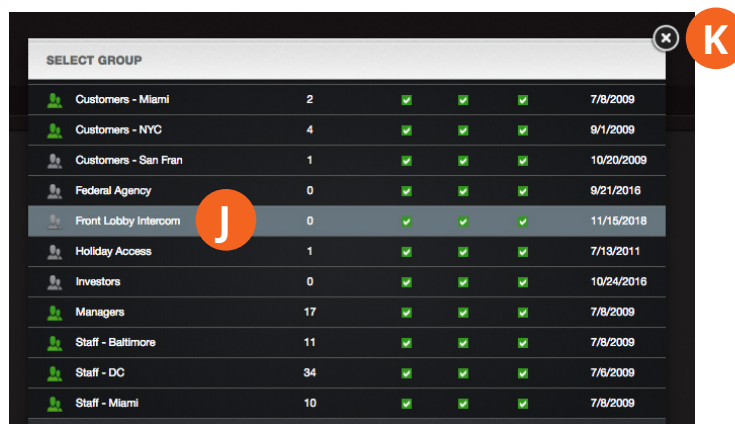
Note: In order for the 2N IP Verso unit to be able to ingest phone numbers from Brivo Access, the phone number MUST include a country code. For phone numbers in the United States and Canada, this means including a 1 before the ten digit phone number. DO NOT use dashes when entering phone numbers.

Note: If a phone number is not present, the name of the phone directory recipient will not be displayed in the Audio Configuration Tool, and will not appear in the 2N IP Verso Directory.

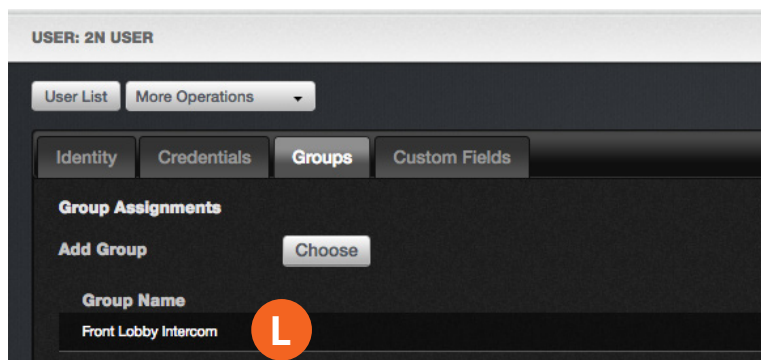
Once you have complete the steps above, move to the Groups tab (H) of the User page and click the Choose button (I).



A pop-up window will appear and you should select the Group (J) you configured at the beginning of this process. Click on the large X in the upper right-hand corner of the pop-up window (K) to dismiss the pop-up window.



The User page will reappear and the selected group will be displayed in the Group List (L).



Brivo Access Audio Configuration

From the Setup tab, click the Sites/Doors tab, and then select Audio Devices and the Audio Device List page displays. You then click on the Add Device (A) button.

AUDIO DEVICE LIST				
Add Device A				
Name	Model	History	Device	Directory
Front Door North Building Intercom	2N Verso	View History >>	Edit Device	Define
West Entrance	2N Verso	View History >>	Edit Device	Define

1. Enter the Device Name (B).
2. Enter the MAC Address you recorded at the beginning of the installation process (C).
3. Write down the Password (D).

Note: This password will only be displayed one time until saved on this page. If you do not record this password, you may press the Regenerate (E) button.

4. Enter a four digit door release code for switch 0 (F) (or switch 1) if the intercom call recipient should enter a four digit code to trigger a relay output.
5. Click Save Device (G).

Audio Configuration Tool
ezs100

ADD AUDIO DEVICE

Device Name

Front Lobby Intercom **B**

Model

2N Verso

Password

lku894aw **D**

[Regenerate](#) **E**

MAC Address

7C-1E-03-03-14-00 **C**

Code for Switch 0

1234 **F**

Description

Code for Switch 1

Description

Code for Switch 2

Description

Code for Switch 3

Description

[Cancel](#)

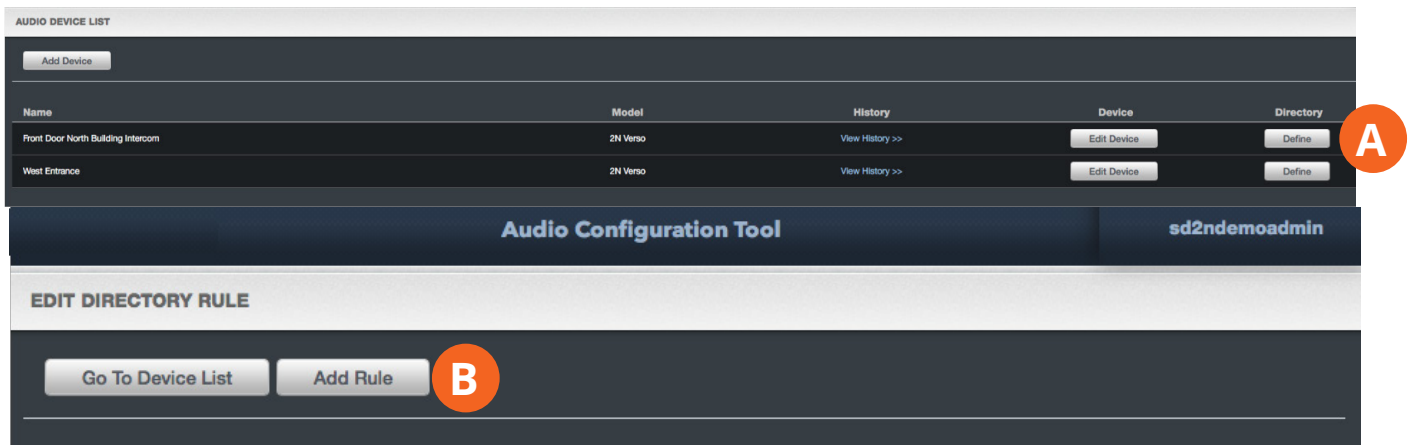
[Generate Config File](#)

[View History](#)

[Save Device](#) **G**

2N IP Verso User List Display Configuration

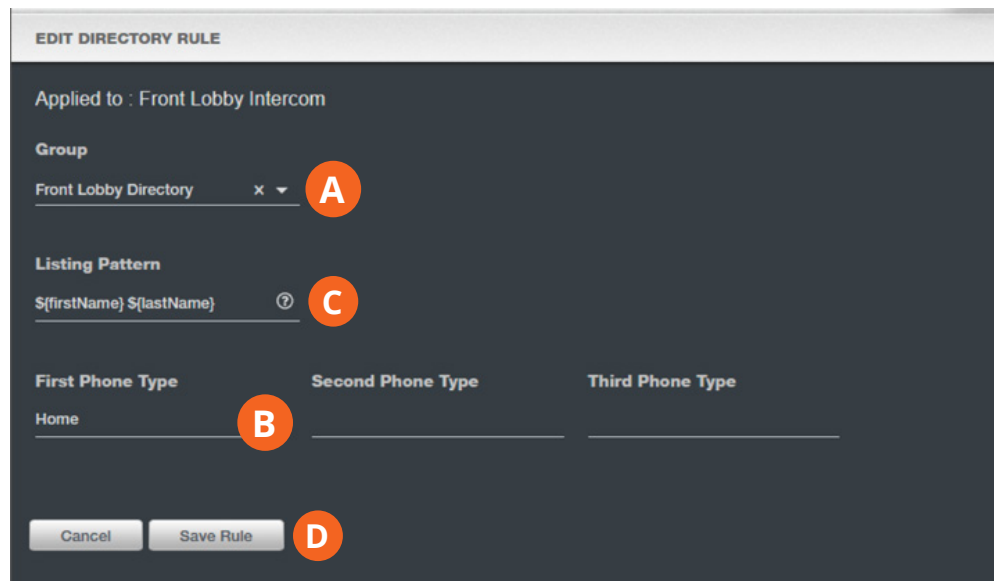
From the Setup tab, click the Sites/Doors tab, and then select Audio Devices and the Audio Device List page displays. You then click on the Define (A) button. The Edit Directory Rule page appears. Click on the Add Rule (B) button.



The screenshot shows the 'AUDIO DEVICE LIST' interface. At the top, there is an 'Add Device' button. Below it is a table with columns: Name, Model, History, Device, and Directory. The table contains two rows: 'Front Door North Building Intercom' and 'West Entrance', both with '2N Verso' as the model. To the right of each row are 'Edit Device' and 'Define' buttons. An orange circle with the letter 'A' highlights the 'Define' button for the 'Front Door North Building Intercom' row. Below the table is a dark blue bar with the text 'Audio Configuration Tool' and 'sd2ndemoadmin'. Below that is a section titled 'EDIT DIRECTORY RULE' with two buttons: 'Go To Device List' and 'Add Rule'. An orange circle with the letter 'B' highlights the 'Add Rule' button.

The Edit Directory Rule page displays.

1. Select the Group you configured for this process from the dropdown list (A).
2. In each phone type pulldown (B), select which Access phone type should be used. The first phone type is the first one the intercom will dial. Phone numbers 2 and 3 will only be dialed if the previous phone does not answer before the timeout configured in the intercom.
3. Configure a listing pattern (C) to specify how the names will be displayed on the list. See below for additional information on Listing Patterns.
4. Click Save (D).



The screenshot shows the 'EDIT DIRECTORY RULE' page. At the top, it says 'Applied to : Front Lobby Intercom'. Below this is a 'Group' section with a dropdown menu showing 'Front Lobby Directory'. An orange circle with the letter 'A' highlights the dropdown. Below that is a 'Listing Pattern' section with a text input field containing '\$(firstName) \$(lastName)'. An orange circle with the letter 'C' highlights the input field. Below that are three phone type sections: 'First Phone Type' with a dropdown showing 'Home', 'Second Phone Type', and 'Third Phone Type'. An orange circle with the letter 'B' highlights the 'First Phone Type' dropdown. At the bottom are two buttons: 'Cancel' and 'Save Rule'. An orange circle with the letter 'D' highlights the 'Save Rule' button.

Listing Patterns

Standard listing patterns can be used to map Brivo User account fields to the directory rule. These listing patterns must follow a specific format for proper use. Formatting starts with a dollar sign "\$" followed by an opening curly bracket "{", the field name, and a closing curly bracket "}" as indicated in this example:

```
#{lastName}
```

The following are standard Access User field names and the equivalent listing pattern for use with phone directory listing rules:

First Name	#{firstName}
Middle Name	#{middleName}
Last Name	#{lastName}

Access custom fields can also be used by using a "c_" in front of the custom field name. For example; to use a custom field called "Company Name", the listing pattern would look like:

```
#{c_CompanyName}
```

Examples:

To list directory contents by last name, e.g. Jones, Bob

The listing pattern rule will appear as: #{lastName}, #{firstName}

1. All characters outside of curly brackets except the dollar sign (\$) are interpreted in the literal sense.
2. All custom field names must begin with the characters "c_", e.g. #{c_CompanyName} to represent "Company Name".

2N IP Verso Unit Configuration/Auto Provisioning

From the Dashboard, click on the System tile to access the Auto Provisioning sub-page (A). From there, click on the Configuration tab (B) to access the settings used to connect and authenticate with Brivo Access.

1. Check the Configuration Update Enabled checkbox (C).
2. Set the Server Address (D) to "https://audio.brivo.com".
3. Set File Path (E) to "/deviceapi/config/2n"
4. Set the Username (F) to the MAC Address that you wrote down off the back of the 2N IP Verso unit. The MAC address MUST be entered using only capital letters.
5. Enter the password (G) you wrote down when you configured the Audio Device in Brivo Access.

Note: If you did not write down the password from earlier, you will need to log into Brivo Access, go back to the Edit Audio Device page and click the Regenerate button. This will generate a new password, which you should then write down to enter on the Configuration page in the 2N IP Verso interface.

6. On the Update Period dropdown menu, select Hourly (H). This is recommended because this parameter will determine the frequency at which the intercom connects to Access to check for user directory updates.
7. Click Apply & Update (I) to test the intercom's ability to download an configuration file from Brivo Access.
8. Update Result (J) (private configuration) will change status to "Updated" and Communications Results Detail (J) (private configuration) will change status to "HTTP 200" after a successful intercom directory download from Brivo Access. The intercom will reboot 10-15 seconds later and display the new users in the Intercom Directory.

The screenshot displays the 'Configuration' tab of the 2N IP Verso interface. The left sidebar shows the 'System' menu with 'Auto Provisioning' selected (A). The main content area has the 'Configuration' tab selected (B). The 'Configuration Update Enabled' checkbox is checked (C). The 'Address Retrieval Mode' is set to 'Manual Settings'. The 'Server Address' is 'https://intercom-inta.brivo' (D). The 'DHCP (Option 66/150) Address' is '/deviceapi/config/2n/' (E). The 'Use Authentication' checkbox is checked. The 'Username' is '7C-1E-B3-03-29-2E' (F). The 'Password' is masked with asterisks (G). The 'Trusted Certificate' is 'Not used' and the 'User Certificate' is 'Self Signed'. The 'Update Schedule' section shows 'At Boot Time' set to 'Check for Update', 'Update Period' set to 'Hourly' (H), 'Update At' set to '01:30', and 'Next Update At' set to '11/12/2018 14:58:28'. The 'Apply & Update' button is visible (I). The 'Update Status' section shows 'Last Update At' as '11/12/2018 13:58:28', 'Update Result (Common Config)' as 'Updated', 'Communication Result Detail (Common configuration)' as 'HTTP status: 200', 'Update Result (Private Config)' as 'Updated' (J), and 'Communication Result Detail (Private configuration)' as 'HTTP status: 200'.

Configuring Ring Time Limit

When using multiple phone numbers per user (call rollover), set the ring timeout to avoid voicemail before rolling over to the next call. Fifteen (15) seconds allows for four rings (four seconds each) less one second to rollover to the next phone number before voicemail answers.

The screenshot shows the Brivo configuration interface. On the left is a sidebar with 'Services' and a list of options: Phone, Streaming, Onvif, E-mail, and Automation. The 'Phone' option is selected. The main area has tabs for 'SIP 1', 'SIP 2', 'Calls', 'Audio', 'Video', and '2N Indoor Units'. The 'Calls' tab is active. Under 'Incoming Calls', there are two 'Call Answering Mode' dropdowns, both set to 'Always Busy', and a 'Pick up in' input field set to '0' with a '[s]' unit indicator. Under 'Outgoing Calls', there is a 'Ring Time Limit' input field set to '15' with a '[s]' unit indicator, and a 'Dial Cycles Limit' input field set to '3'.

Revision List

Date	Description	Version
1/17/19	Initial Draft	1.0
1/31/19	Updated 2N part numbers	1.1
08/09/22	Removed Onair references	1.2