DevConnect Program

Application Notes for Unimax 2nd Nature 9.6 with Avaya Aura® Communication Manager 10.1 and Avaya Aura® Application Enablement Services 10.1 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for Unimax 2nd Nature 9.6 to interoperate with Avaya Aura® Communication Manager 10.1 and Avaya Aura® Application Enablement Services 10.1. Unimax 2nd Nature is a centralized enterprise voice administration and provisioning solution.

In the compliance testing, Unimax 2nd Nature used the System Management Services from Avaya Aura® Application Enablement Services to provide an administration interface for provisioning of resources on Avaya Aura® Communication Manager.

Readers should pay attention to **Section 2**, in particular the scope of testing as outlined in **Section 2.1** as well as any observations noted in **Section 2.2**, to ensure that their own use cases are adequately covered by this scope and results.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program.

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1. Introduction

These Application Notes describe the configuration steps required for Unimax 2nd Nature 9.6 to interoperate with Avaya Aura® Communication Manager 10.1 and Avaya Aura® Application Enablement Services 10.1. Unimax 2nd Nature is a centralized enterprise voice administration and provisioning solution.

In the compliance testing, 2nd Nature used the System Management Services (SMS) from Application Enablement Services to provide an administration interface to 2nd Nature clients for provisioning of resources on Communication Manager.

SMS is a web service that provides programmatic access to a subset of administration objects available via Communication Manager System Access Terminal (SAT) screens. SMS enables clients with Simple Object Access Protocol (SOAP) based access to list, display, add, change, and remove specific managed objects on Communication Manager.

Testing was performed with the 2nd Nature client application, which supports the complete set of objects on the 2nd Nature server. The results should be extendable to other client applications, LineOne, HelpOne, and Spotlight, with each supporting a subset of the objects on 2nd Nature.

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2. General Test Approach and Test Results

All test cases were performed manually. Actions were taken on 2nd Nature and Communication Manager to alter data associated with supported objects, and to verify data stayed synchronized between the two systems.

The objects were modified on 2nd Nature using the 2nd Nature client application, and modified on Communication Manager using SAT. For each supported object, a subset of parameters was chosen at random to modify and verify, therefore not all parameters were tested.

The serviceability test cases were performed manually by disconnecting/reconnecting the Ethernet connection to the 2nd Nature server.

DevConnect Compliance Testing is conducted jointly by Avaya and DevConnect members. The jointly defined test plan focuses on exercising APIs and/or standards-based interfaces pertinent to the interoperability of the tested products and their functionalities. DevConnect Compliance Testing is not intended to substitute full product performance or feature testing performed by DevConnect members, nor is it to be construed as an endorsement by Avaya of the suitability or completeness of a DevConnect member's solution.

Avaya recommends our customers implement Avaya solutions using appropriate security and encryption capabilities enabled by our products. The testing referenced in these DevConnect Application Notes included the enablement of supported encryption capabilities in the Avaya products. Readers should consult the appropriate Avaya product documentation for further information regarding security and encryption capabilities supported by those Avaya products.

Support for these security and encryption capabilities in any non-Avaya solution component is the responsibility of each individual vendor. Readers should consult the appropriate vendor-supplied product documentation for more information regarding those products.

For the testing associated with these Application Notes, the interface between Application Enablement Services and 2nd Nature utilized the enabled capabilities of HTTPS.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on 2nd Nature:

- Use of SMS service to download, synchronize, and display specific managed objects.
- Use of SMS service to add, change, and remove specific managed objects.
- Proper handling of the following SMS objects:

AAR Analysis	Locations
Abbreviated Dialing Group	Node Names
Abbreviated Dialing System	Off PBX Telephone Feature Name Ext
Agent	Off PBX Telephone Station Mapping
Alias Station	Pickup Group
Amw	Public Unknown Numbering
Announcement	Remote Access
ARS Analysis	Route Pattern
Authorization Code	Service Hours Table
Configuration	Site Data
COR	Station
COS	System Parameters Customer Options
Coverage Answer Group	System Parameters Features
Coverage Path	System Parameters Special Applications
Coverage Remote	System Parameters Security
Data Module	Tenant
Dial Plan Analysis	Terminating Extension Group
Extension Station	Trunk Group
Feature Access Codes	Uniform Dial Plan
Holiday Tables	VDN
Hunt Group	Vector
Intercom Group	VRT
IP Stations	Vector Variables

The serviceability testing focused on verifying the ability of 2nd Nature to recover from adverse conditions, such as disconnecting/reconnecting the Ethernet connection to the 2nd Nature server.

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2.2. Test Results

All test cases were executed and verified. The following were observations on 2nd Nature from the compliance testing.

- By design, 2nd Nature does not necessarily duplicate all parameter validations that are supported by Communication Manager.
- Attendant and remote access extensions did not get factored into the Extensions Available and Extension Used listings.
- Cannot add vector numbers beyond 2000 for a large system despite capacity limit being 8000 on Communication Manager. This is being addressed by Unimax, and the fix will be made available in a future release.
- Creation of ring-stat station button was allowed despite the associated SA8428 Station User Button Ring Control special application being disabled.
- When Communication Manager Authorization Codes are configured for 13 Digits, add and modify codes via 2N receives a failure "Code length invalid; check code length". This behavior is consistent with the SMS Test page. When CM Codes are configured for 8 digits this issue is not experienced.

2.3. Support

Technical support on 2nd Nature can be obtained through the following:

- **Phone:** (612) 204-3661
- **Email :** http://www.unimax.com/support

3. Reference Configuration

The configuration used for the compliance testing is displayed in **Figure 1**.

The detailed administration of basic connectivity between Communication Manager and Application Enablement Services, and of objects on Communication Manager are not the focus of these Application Notes and will not be described.

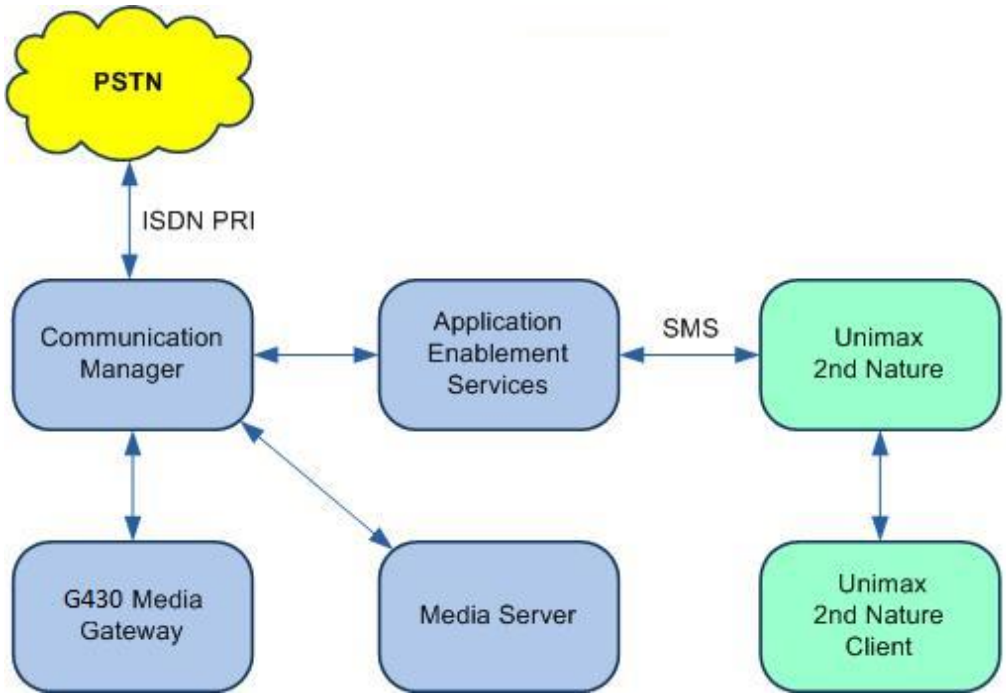

Figure 1: Compliance Testing Configuration

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4. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment/Software	Release/Version
Avaya Aura® Communication Manager in Virtual Environment	10.1.2 (10.1.2.0.0.974.27783)
Avaya G430 Media Gateway	42.8.0
Avaya Aura® Media Server in Virtual Environment	10.1.0.125
Avaya Aura® Application Enablement Services in Virtual Environment	10.1.2 (10.1.2.0.0.12-0)
Unimax 2nd Nature on Windows Server 2012 R2 Standard • Microsoft SQL Server 2019 Express	9.6 G2
Unimax 2nd Nature on Windows 10 Pro	9.6 G2

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5. Configure Avaya Aura® Communication Manager

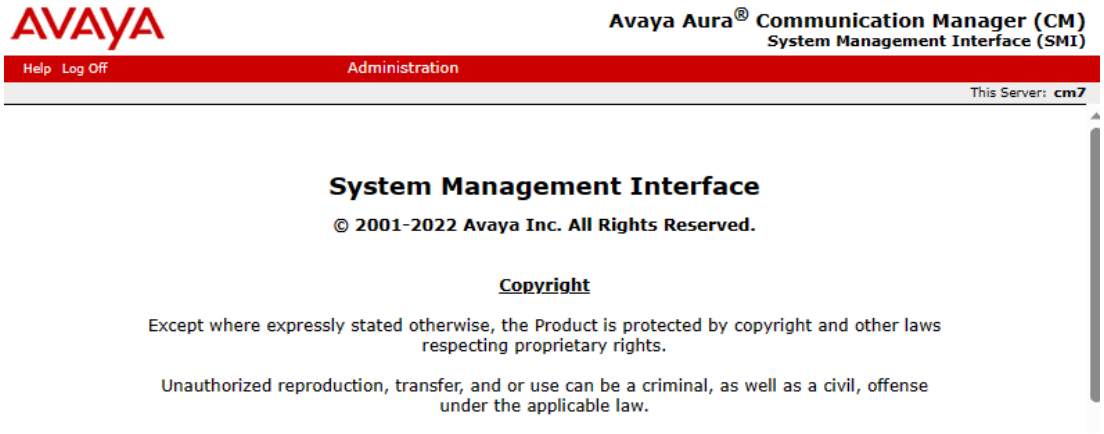
This section provides the procedures for configuring Communication Manager. The procedures include the following area:

- Administer accounts

5.1. Administer Accounts

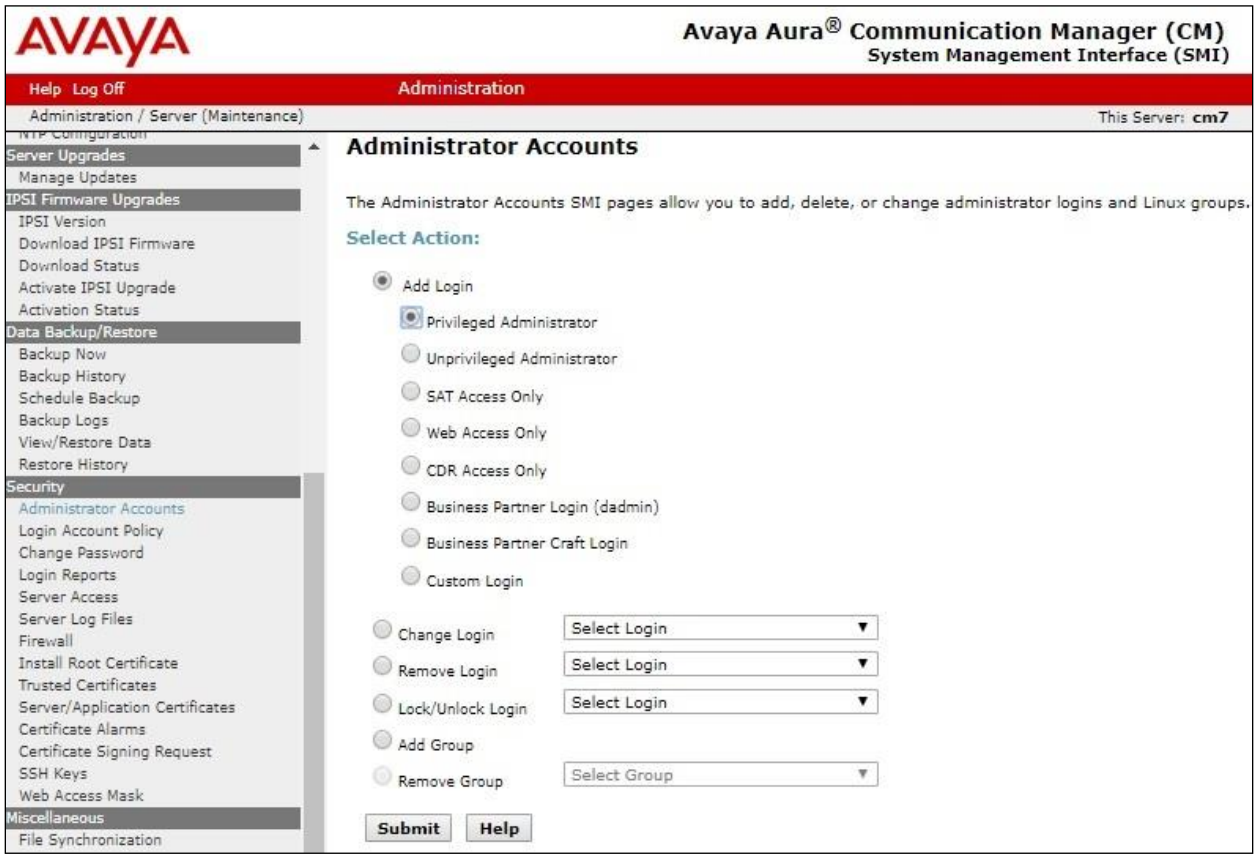
Access the web-based interface by using the URL "https://ip-address" in an Internet browser window, where "ip-address" is the IP address of Communication Manager. Log in using the appropriate credentials.

The **System Management Interface** screen is displayed next. Select **Administration → Server (Maintenance)** from the top menu.



The **Server Administration** screen is displayed. Scroll the left pane as necessary and select **Security → Administrator Accounts**.

The **Administrator Accounts** screen is displayed next. Select **Add Login** and **Privileged Administrator**, as shown below.



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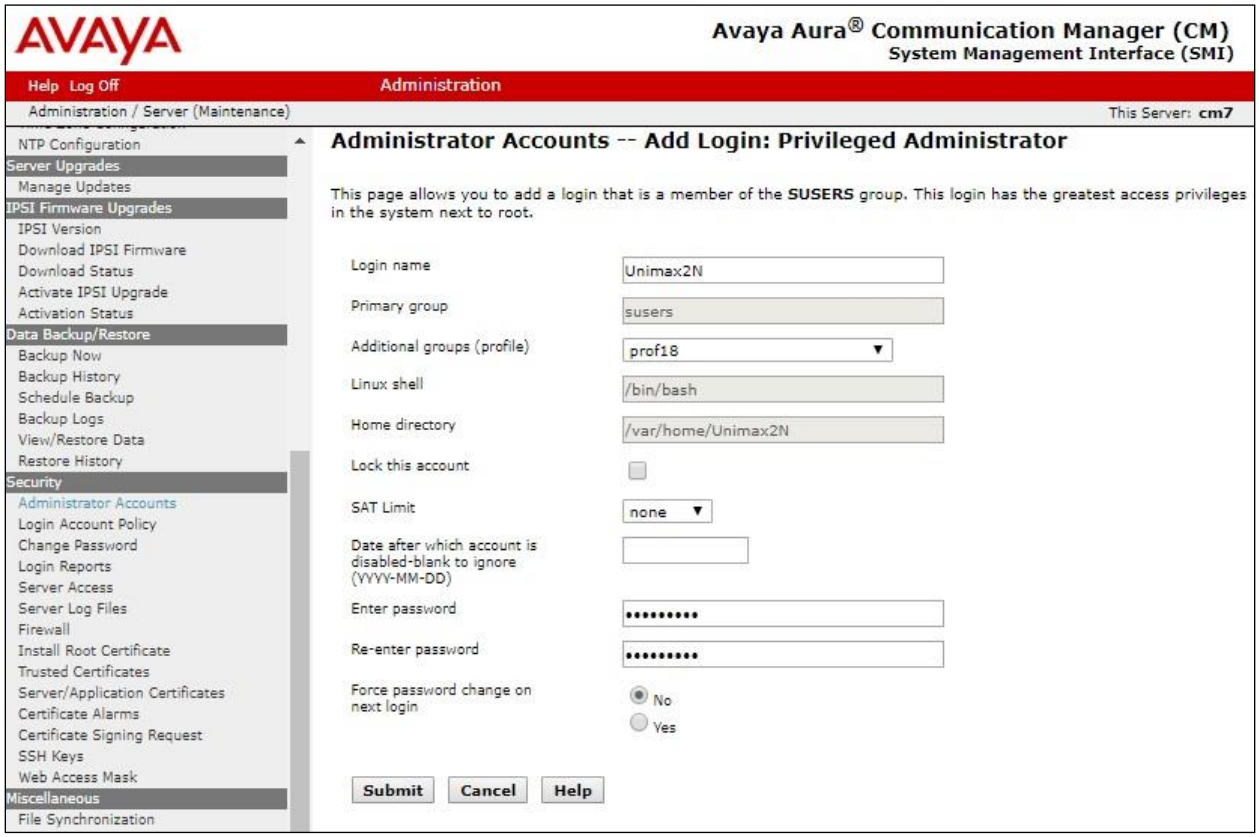
The **Administrator Accounts** screen is updated. Enter the desired credentials for **Login name**, **Enter password or key**, and **Re-enter password or key**. Retain the default values in the remaining fields.

Make a note of the account credentials, which will be used later to configure 2nd Nature.



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6. Configure Avaya Aura® Application Enablement Services

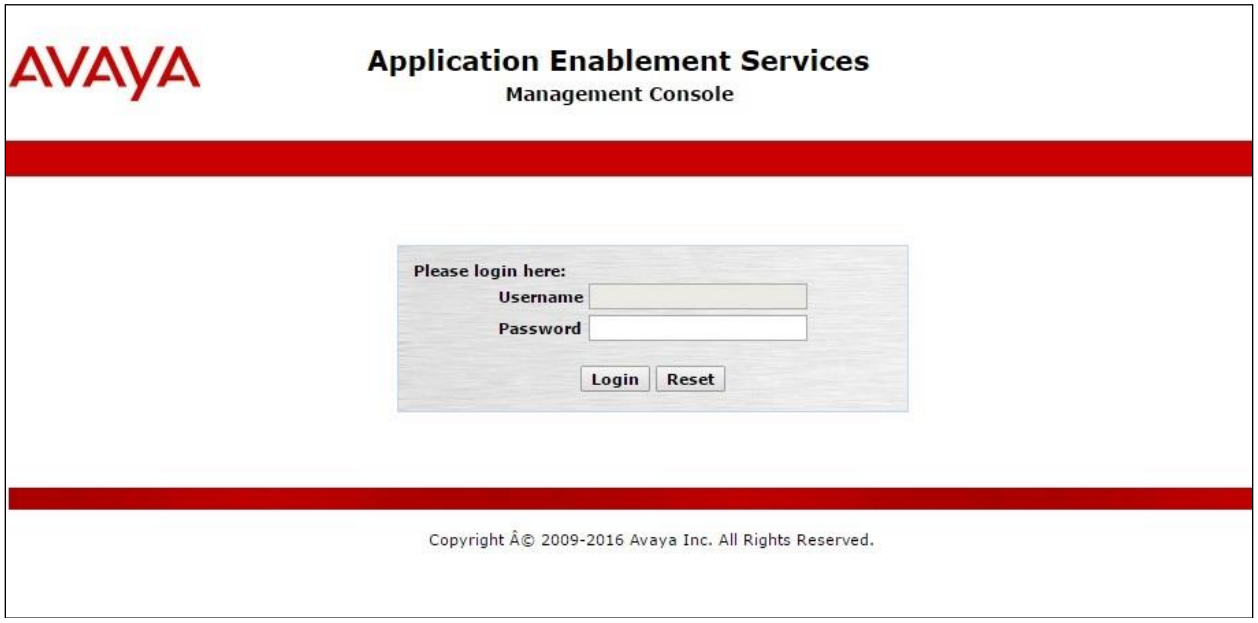
This section provides the procedures for configuring Application Enablement Services. The procedures include the following areas:

- Launch OAM interface
- Administer ports
- Administer SMS properties

6.1. Launch OAM Interface

Access the OAM web-based interface by using the URL "https://ip-address" in an Internet browser window, where "ip-address" is the IP address of the Application Enablement Services server.

The **Please login here** screen is displayed. Log in using the appropriate credentials.



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The **Welcome to OAM** screen is displayed next.

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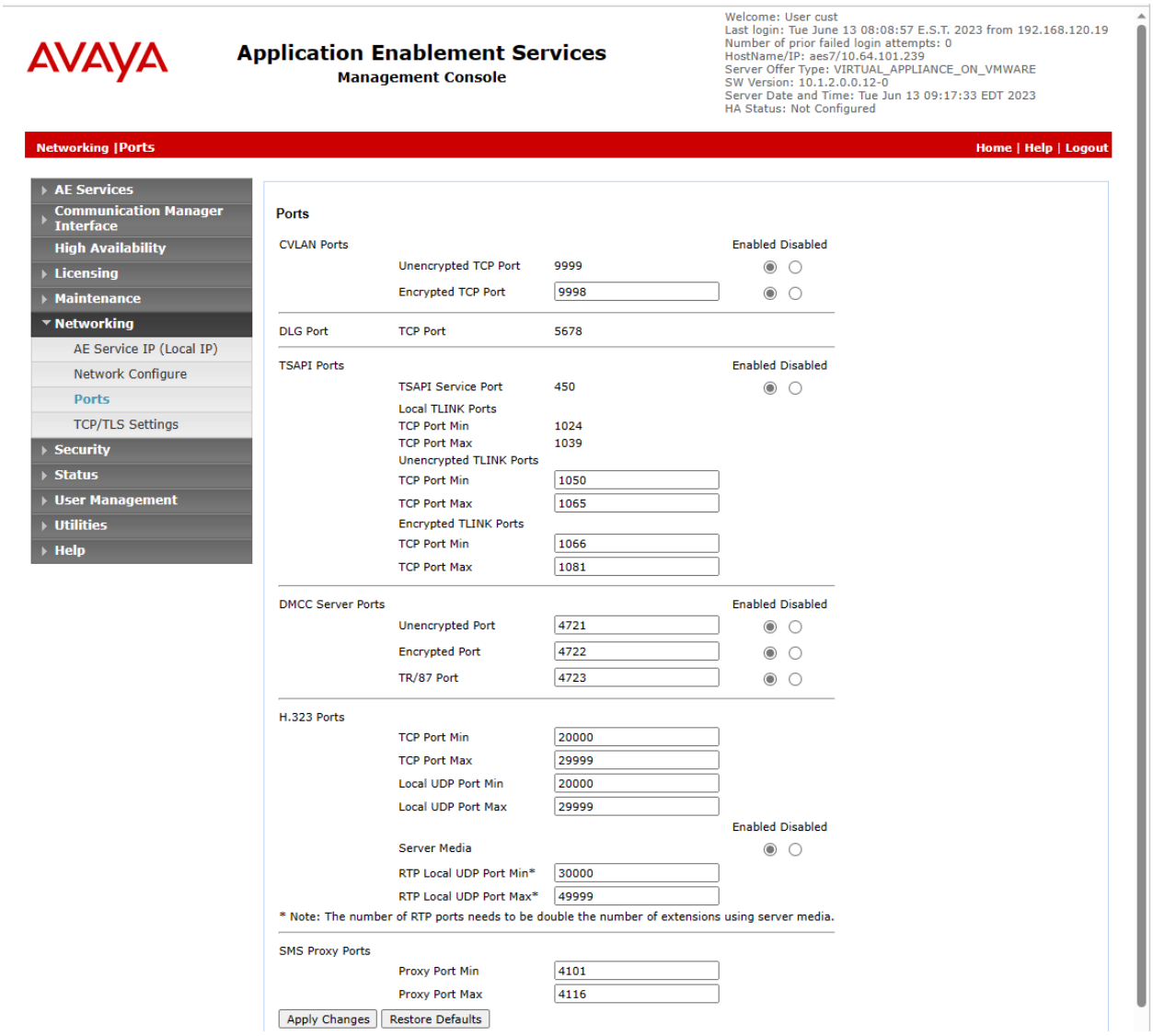
6.2. Administer Ports

Select **Networking → Ports** from the left pane, to display the **Ports** screen in the right pane. Scroll down to the **SMS Proxy Ports** sub-section and configure **Proxy Port Min** and **Proxy Port Max** to the desired values. Note that SMS can use up to 16 ports, and the compliance testing used the default ports "4101-4116" as shown below.



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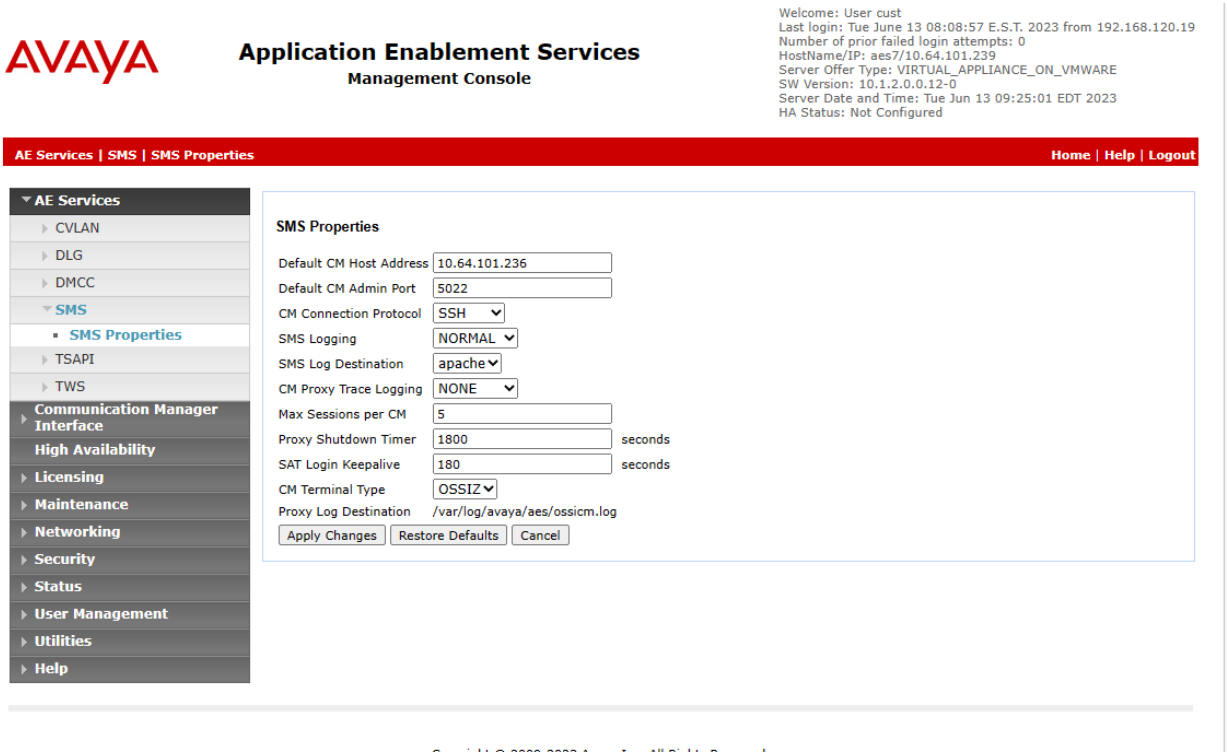
6.3. Administer SMS Properties

Select **AE Services → SMS → SMS Properties** from the left pane, to display the **SMS Properties** screen in the right pane.

For **Default CM Host Address**, enter the IP address of Communication Manager, in this case "10.64.101.236." Retain the default values for the remaining fields.



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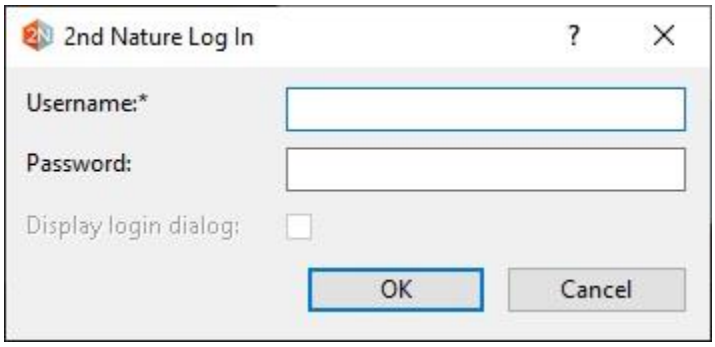
7. Configure Unimax 2nd Nature

This section provides the procedures for configuring 2nd Nature. The procedures include the following areas:

- Launch 2nd Nature
- Administer system
- Administer system connection
- Administer system releases
- Start communication service
- Download data

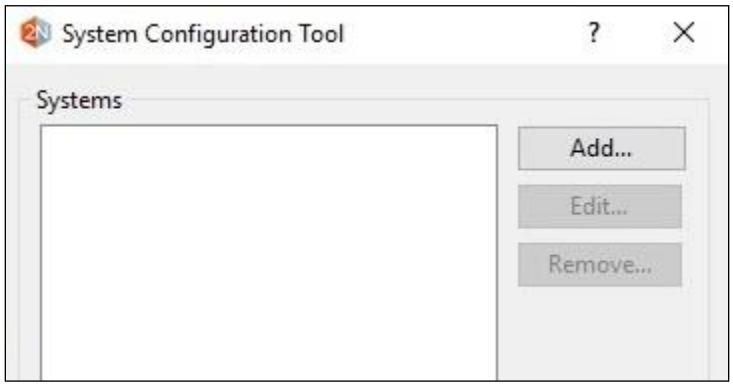
7.1. Launch 2nd Nature

From the 2nd Nature server, select **Start → 2nd Nature → 2nd Nature** to launch the application. The **2nd Nature Log In** screen below is displayed. Log in using the appropriate credentials.



7.2. Administer System

Upon initial log in, the **System Configuration Tool** screen is displayed next. Select **Add** to add a new system.



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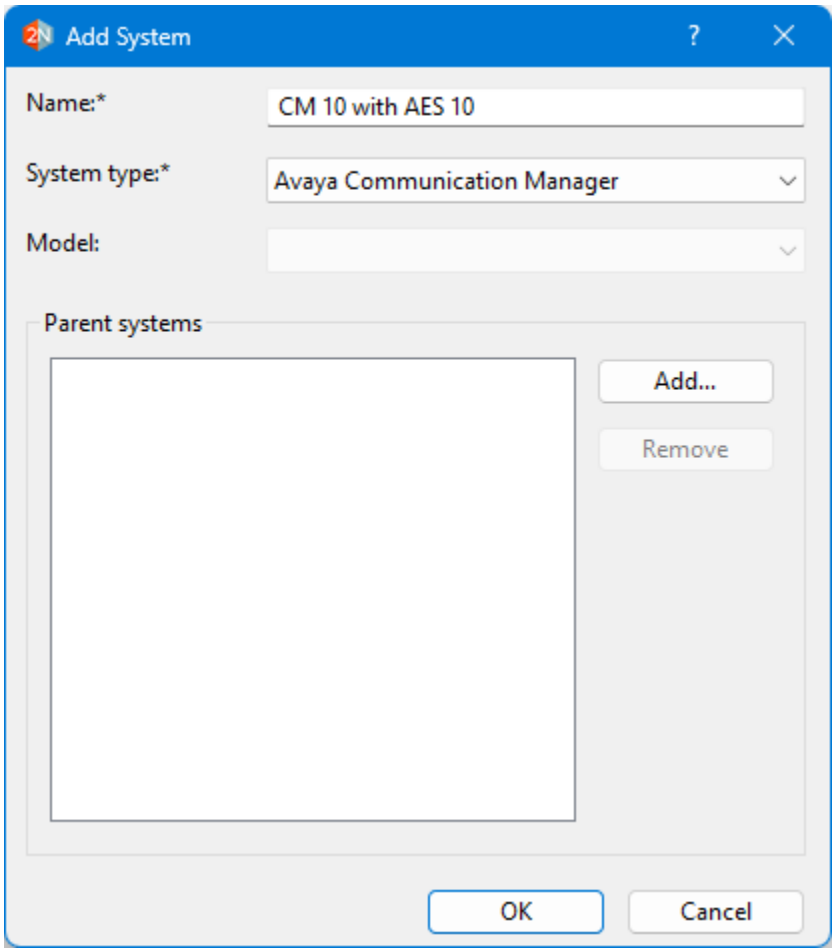
The **Add System** screen is displayed. Enter a descriptive **Name** and select "Avaya Communication Manager" from the **System type** drop-down list, as shown below.



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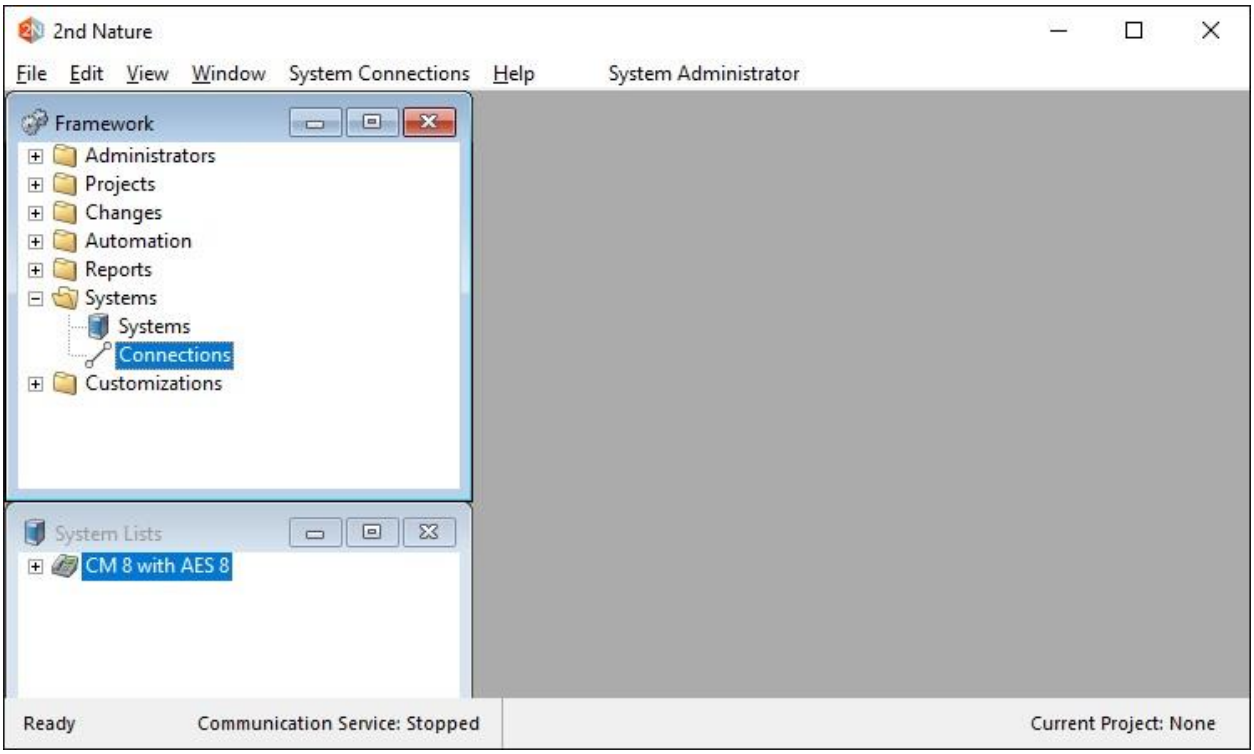
7.3. Administer System Connection

The **2nd Nature** screen below is displayed. From the **Framework** pane, expand and right click on **Systems → Connections**, and select **Create** to create a new connection.



The **Field Selections** screen is displayed next. Click **Browse** and select the system name from **Section 7.2**.

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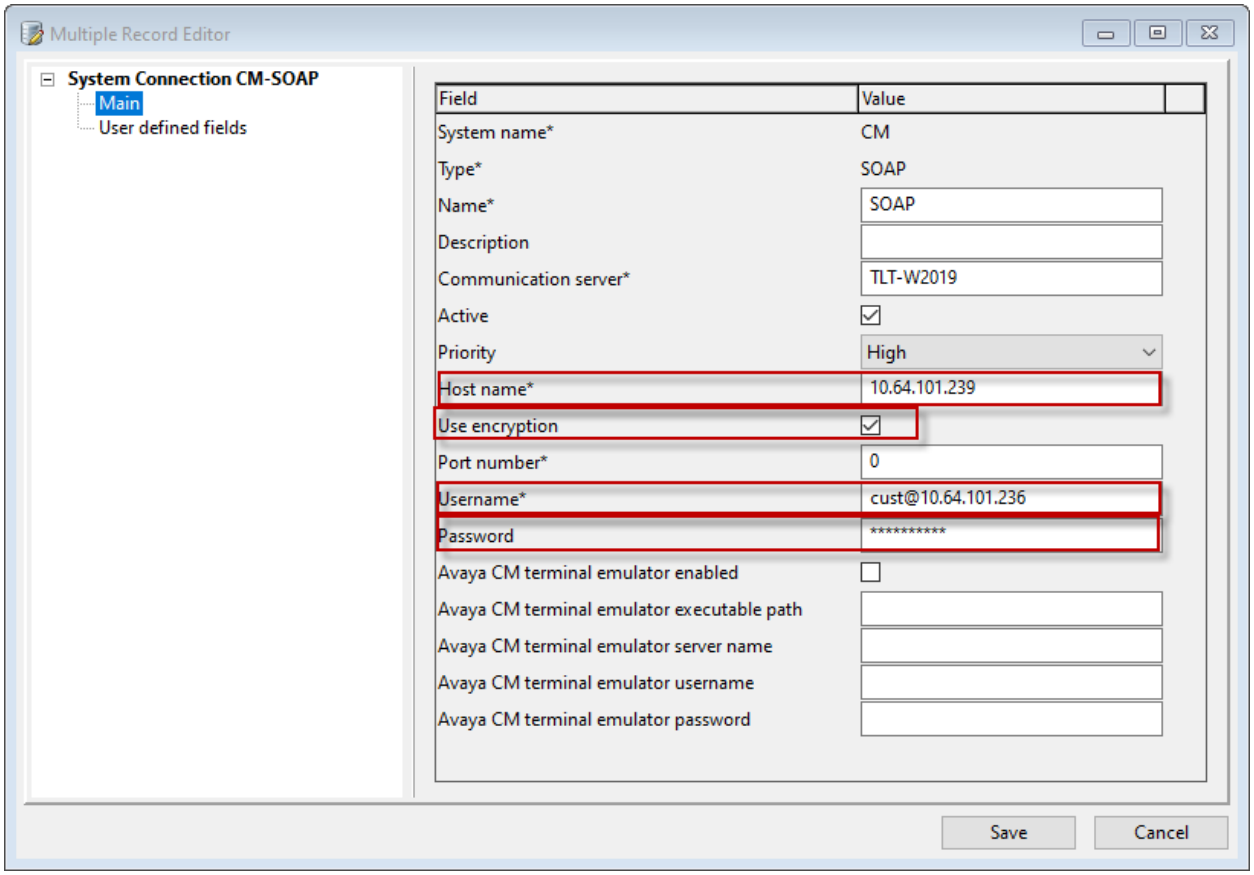
The **Multiple Record Editor** screen is displayed. Enter the following values for the specified fields and retain the default values for the remaining fields.

- **Communicator server:** Host name of the 2nd Nature server.
- **Host name:** Host name or IP address of Application Enablement Services.
- **Use encryption:** Check this field.
- **Username:** Account name from **Section 5.1**, concatenated with IP address.
- **Password:** Account password from **Section 5.1**.

For **Username**, use the format "x@y", where "x" is the account name from **Section 5.1** and "y" is the IP address of Communication Manager.



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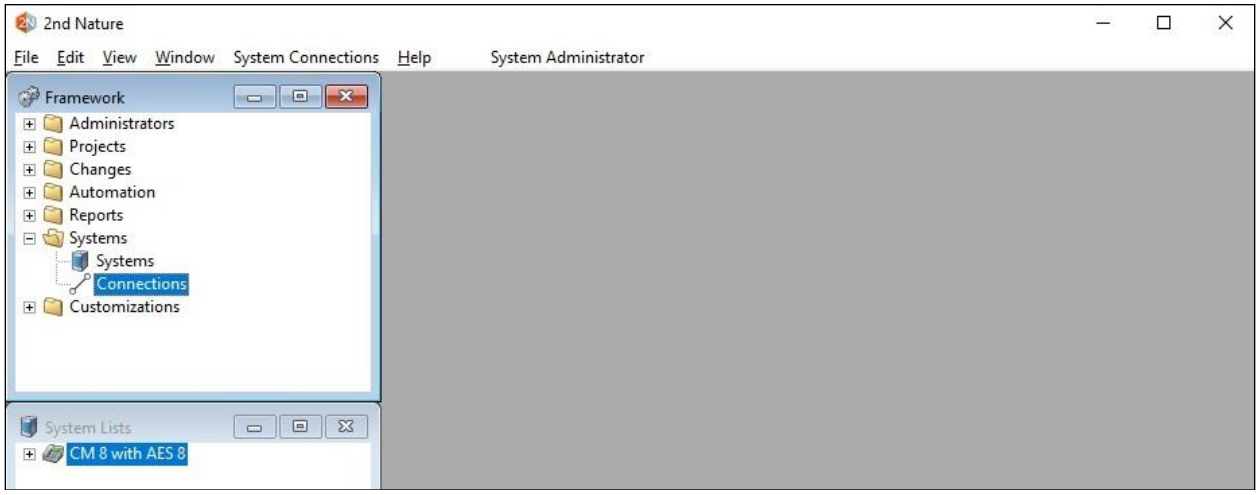
7.4. Administer System Releases

The **2nd Nature** screen below is displayed again. In the **System Lists** pane, right click on the entry associated with the system name from **Section 7.2** and select **Modify**.



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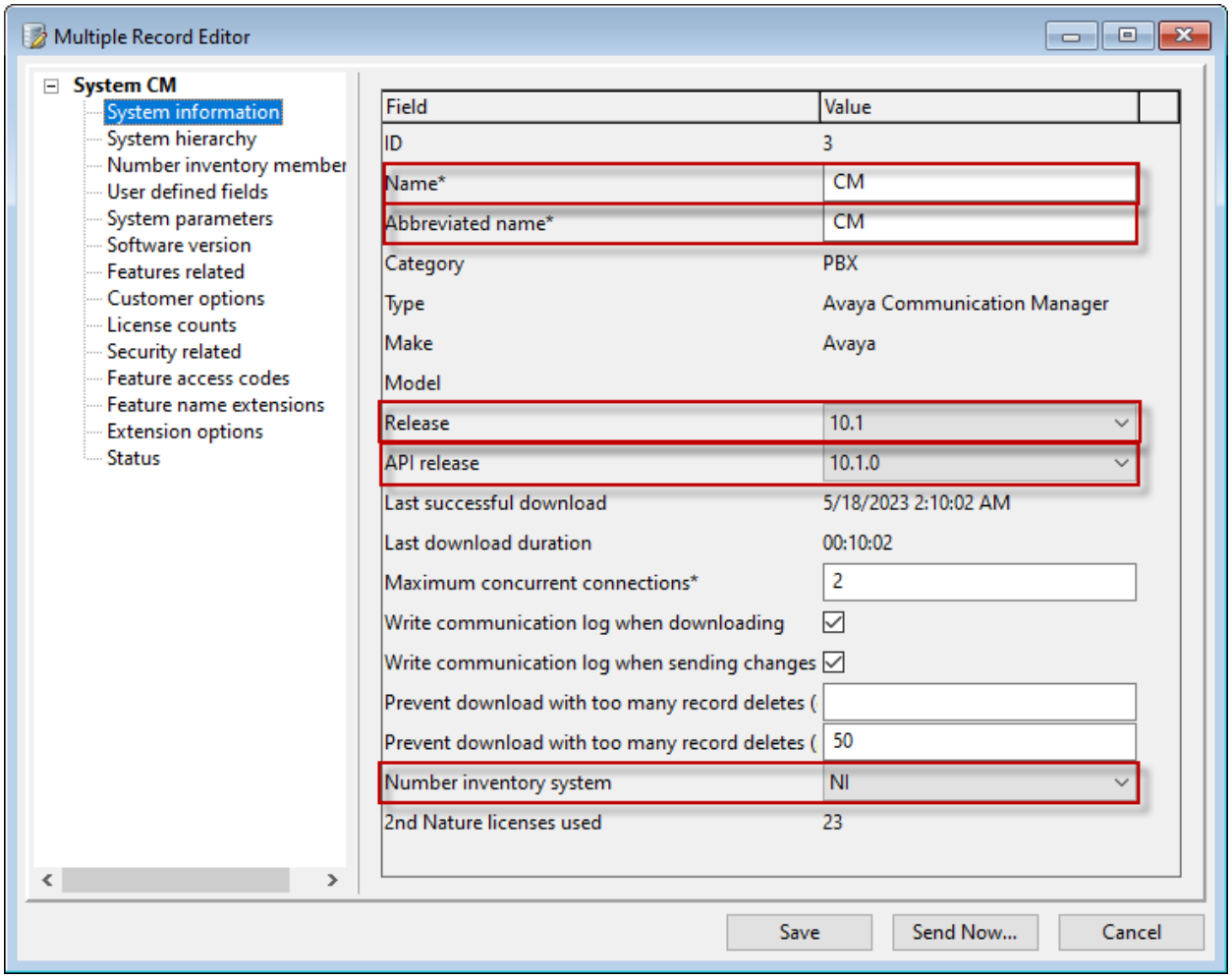
The **Multiple Record Editor** screen below is displayed. Select the following values for the specified fields and retain the default values for the remaining fields.

- **Release:** Release of Communication Manager, in this case "10.1."
- **API release:** Release of Application Enablement Services SMS, in this case "10.1."



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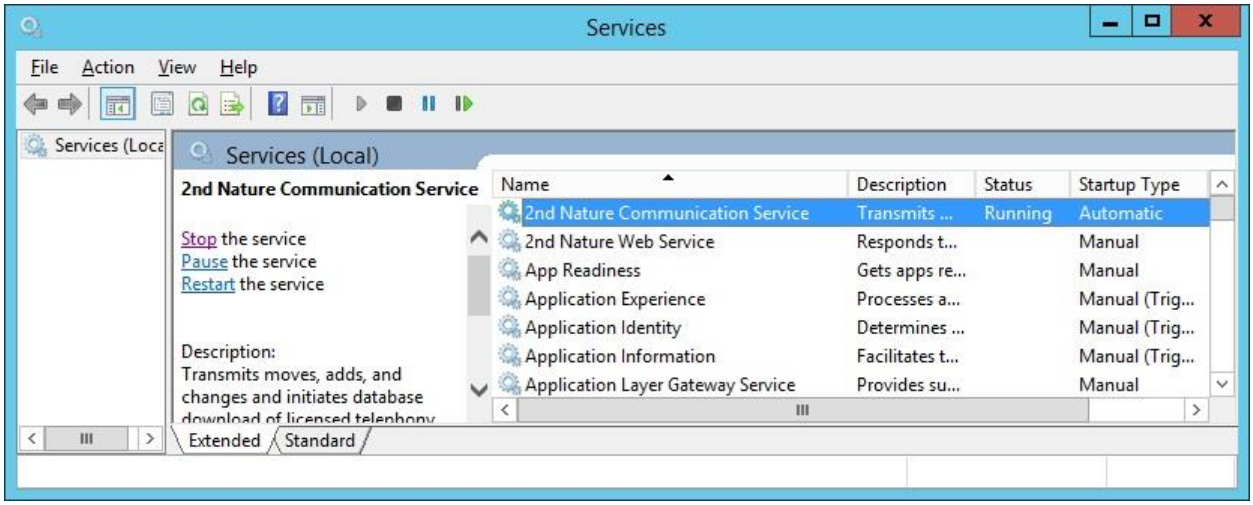
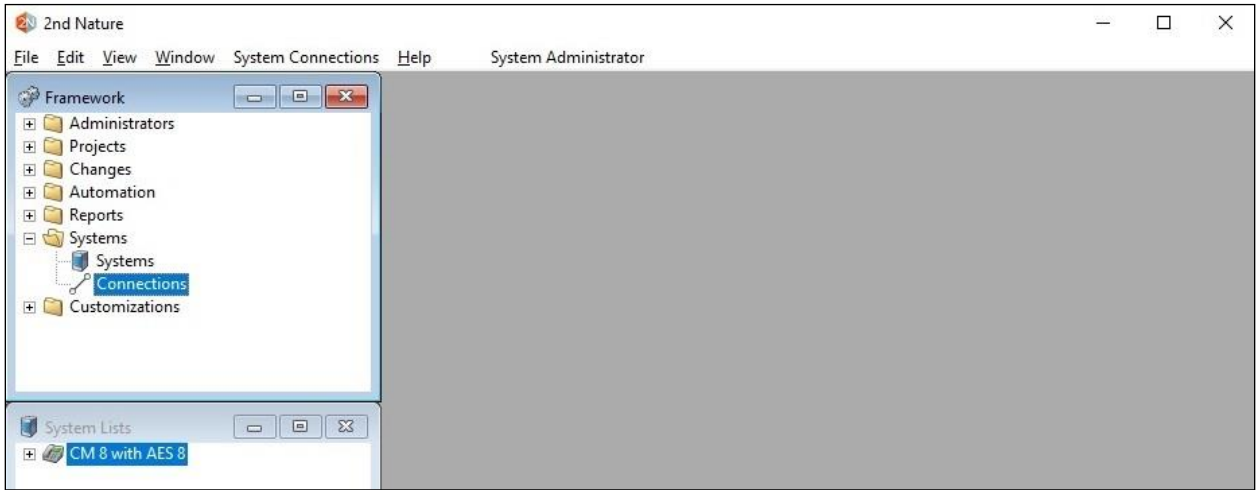
7.5. Start Communication Service

From the 2nd Nature server, select **Start → Control Panel → Administrative Tools → Services** to display the **Services** screen. Start the **2nd Nature Communication Service** shown below.



7.6. Download Data

The **2nd Nature** screen below is displayed again. In the **System Lists** pane, right click on the entry associated with the system name from **Section 7.2** and select **Download** to obtain data and to populate the 2nd Nature database.



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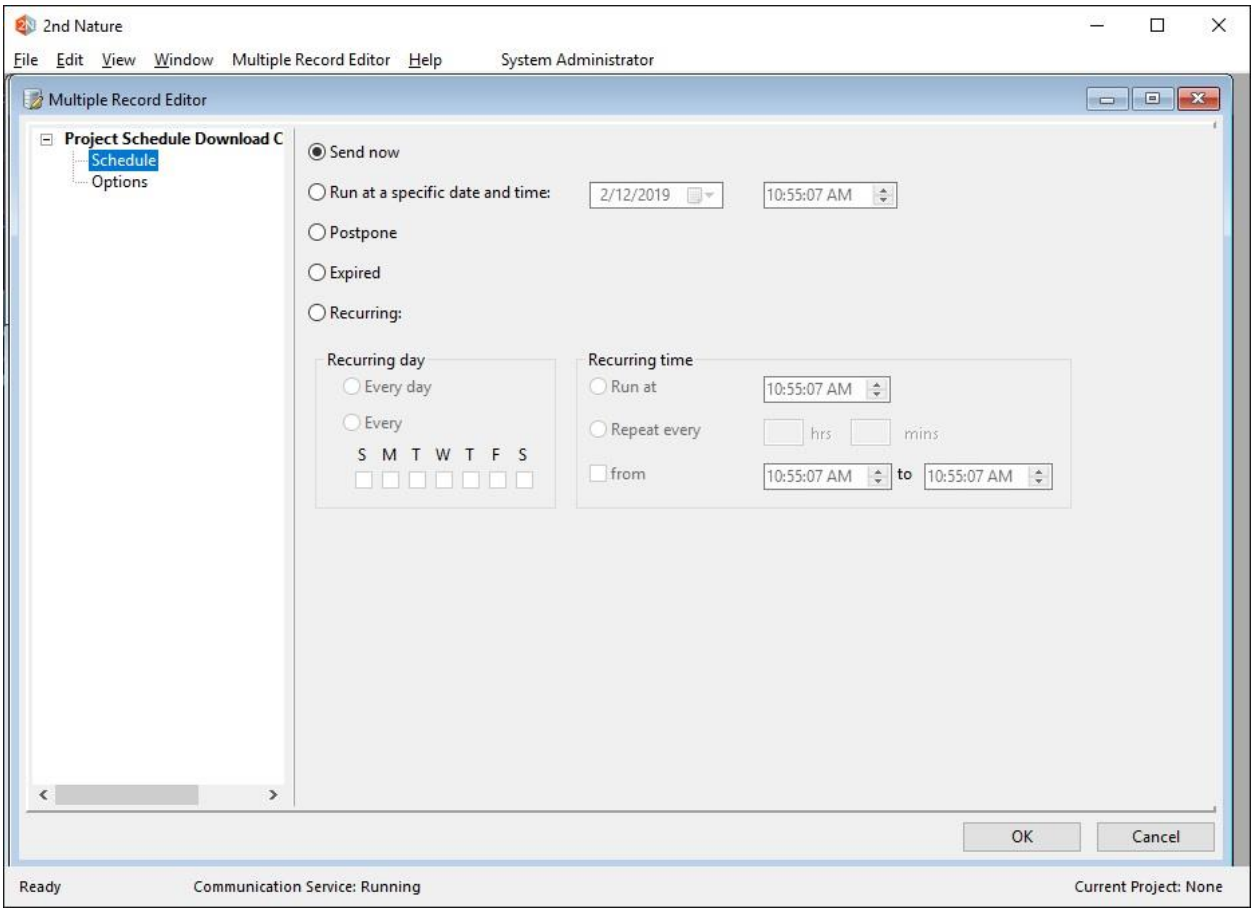
The **Multiple Record Editor** screen below is displayed. Retain all default values to start the download. Note that downloads can also be scheduled to be performed on a regular basis.



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8. Verification Steps

This section provides the tests that can be performed to verify proper configuration of Communication Manager, Application Enablement Services, and 2nd Nature.

For Communication Manager, log into SAT and issue command for a supported SMS object from **Section 2.1**, in this case "list authorization-code".

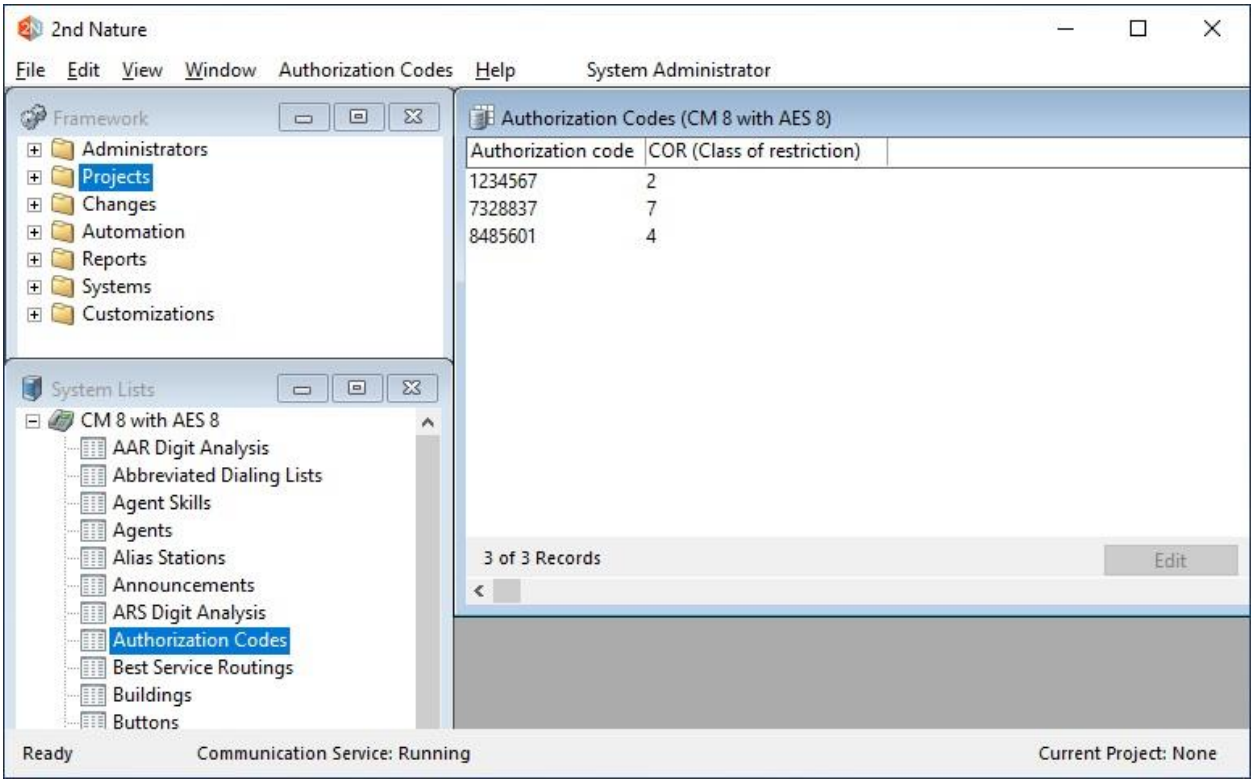
```
list authorization-code

                    LIST AUTHORIZATION CODES REPORT

Authorization Code   Class of Restriction(COR)
1234567                        2
7328837                        7
8485601                        4
```

On the **2nd Nature** screen, expand the entry in the **System Lists** pane, and double click on **Authorization Codes**.

Verify that the **Authorization Codes** pane is created, showing a list of authorization codes retrieved from Communication Manager, as shown below. Also verify that the entries match the results from Communication Manager SAT screen above.



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9. Conclusion

These Application Notes describe the configuration steps required for Unimax 2nd Nature 9.6 to successfully interoperate with Avaya Aura® Communication Manager 10.1 and Avaya Aura® Application Enablement Services 10.1. All feature and serviceability test cases were completed with observations noted in **Section 2.2**.

10. Additional References

This section references the product documentation relevant to these Application Notes.

1. *Administering Avaya Aura® Communication Manager*, Release 10.1.x, Issue 6, May 2023, available at http://support.avaya.com.

2. *Administering Aura® Application Enablement Services*, Release 10.1.x, Issue 7, May 2023, available at http://support.avaya.com.

3. *2nd Nature Administrator Guide*, Version 9.5, November 2021, available as part of 2nd Nature installation.

4. *2nd Nature Avaya Communication Manager User Guide*, Version 9.5, November 2021, available as part of 2nd Nature installation.

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