



Avaya Solution & Interoperability Test Lab

Application Notes for INI EQuilibrium™ with Avaya Voice Portal – Issue 1.0

Abstract

These Application Notes describe the configuration steps required to integrate Interactive Northwest, Inc. (INI) EQuilibrium with Avaya Voice Portal.

INI EQuilibrium is a load-balancing solution for distributing VoiceXML and CCXML page fetch requests from Avaya Voice Portal to multiple application servers. EQuilibrium maintains application server status for all the application servers within its control and directs page fetches only to available application servers. EQuilibrium supports several distribution strategies, such as ordered and round-robin, for selecting an appropriate application server for the next request. EQuilibrium is a software-only solution integrated with Avaya Voice Portal platform. Its administrative menus are integrated into the administrative menus of Voice Portal Management System (VPMS) and alarm events are generated directly into Avaya Voice Portal's alarm stream. This gives the administrator visibility and control over the application servers used by Avaya Voice Portal.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the configuration steps required to integrate Interactive Northwest, Inc. (INI) EQUilibrium with Avaya Voice Portal. INI EQUilibrium is a load-balancing solution for distributing VoiceXML and CCXML page fetch requests from Avaya Voice Portal to multiple application servers. EQUilibrium maintains application server status for all the application servers within its control and directs page fetches only to available application servers. EQUilibrium supports several distribution strategies, such as ordered and round-robin, for selecting an appropriate application server for the next request. EQUilibrium is a software-only solution integrated with Avaya Voice Portal platform. Its administrative menus are integrated into the administrative menus of Voice Portal Management System (VPMS) and alarm events are generated directly into Avaya Voice Portal's alarm stream. This gives the administrator visibility and control over the application servers used by Avaya Voice Portal.

EQUilibrium software is installed directly on the Avaya Voice Portal platform. There are two components of EQUilibrium, one for VPMS and another for Avaya Voice Portal Media Processing Platform (MPP). The VPMS component includes the EQUilibrium menus, the event/alarm monitor, and the EQUilibrium configuration database. An administrator accesses these menus via the VPMS menu structure to configure EQUilibrium. The EQUilibrium configuration is stored in specific database tables within the PostgreSQL database on VPMS. Application servers, controlled by EQUilibrium, and clusters (discussed below) are configured through VPMS.

EQUilibrium allows application servers to be partitioned into separate clusters each with its own distribution strategy. Clusters can be used to achieve specialized types of resource balancing, such as ordered, round-robin, or random. Every Avaya Voice Portal application that uses EQUilibrium must indicate a cluster name in the URL. EQUilibrium Dispatcher will use the cluster name parameter to select the appropriate application server for a page request.

As mentioned above, EQUilibrium also consists of EQUilibrium Dispatcher, a Java application installed on each MPP. When applications are administered on the VPMS, instead of constructing their URLs to point to specific application servers, the URLs are directed to the EQUilibrium Dispatcher on the local MPP. The Dispatcher processes the request by selecting an appropriate application server, rewriting the URL to point to that application server, and forwarding the request. The MPP Dispatcher gets its configuration information from the central VPMS component. Dispatchers can generate alarms when they detect a state change in an application server. Alarms are reported using the standard mechanism on Avaya Voice Portal.

2. General Test Approach and Test Results

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.

2.1. Interoperability Compliance Testing

Compliance testing was performed on two separate configurations.

1. VPMS/MPP on a single server
2. VPMS and MPP on separate servers

The general test approach entailed placing calls manually to Voice Portal and verifying that EQuilibrium dispatched the application to the appropriate application server according to the cluster dispatch method, including *Random*, *Ordered* and *Round-Robin*. Testing was performed with application servers running Apache Tomcat 5.x and 6.x. In addition, various states of the application servers were tested to verify that EQuilibrium would indicate the correct state in the **Monitor** screen, that calls would not be dispatched to offline application servers, and that the appropriate alarms were generated in the VPMS. Finally, the fail-over URL feature in Voice Portal was used together with EQuilibrium to verify that it would be used if the application servers in the cluster were not available.

The compliance test included feature and serviceability testing. Feature testing focused on verifying the following features and functionality:

- Installing EQuilibrium software on the VPMS and MPP.
- Removing EQuilibrium software from the VPMS and MPP.
- Licensing the product.
- Enabling EQuilibrium to report alarms.
- Configuring EQuilibrium with application servers and clusters.
- Generating alarms related to application server state changes.
- Configuring Voice Portal applications to use EQuilibrium.
- Using EQuilibrium in conjunction with a Voice Portal fail-over URL.
- Verifying that the Voice Portal application is dispatched to the appropriate application server according to the cluster distribution strategy and the application server's availability.
- Verifying that the EQuilibrium detects application servers in various states, such as online, offline, or in maintenance mode.
- Verifying that EQuilibrium detects the cluster state, such as online, offline, or degraded.

Serviceability testing focused on verifying the ability of EQuilibrium to recover from adverse conditions, such as VPMS and MPP server restarts.

2.2. Test Results

All test cases were passed.

2.3. Support

To obtain technical support for INI EQuilibrium, contact Interactive Northwest via phone, email or through their website.

- **Web:** <http://www.interactivenw.com/support.php>
- **Email:** support@interactivenw.com
- **Phone:** (800) 808-8090

3. Reference Configuration

The following diagram shows the configuration where VPMS and MPP were running on a single server.

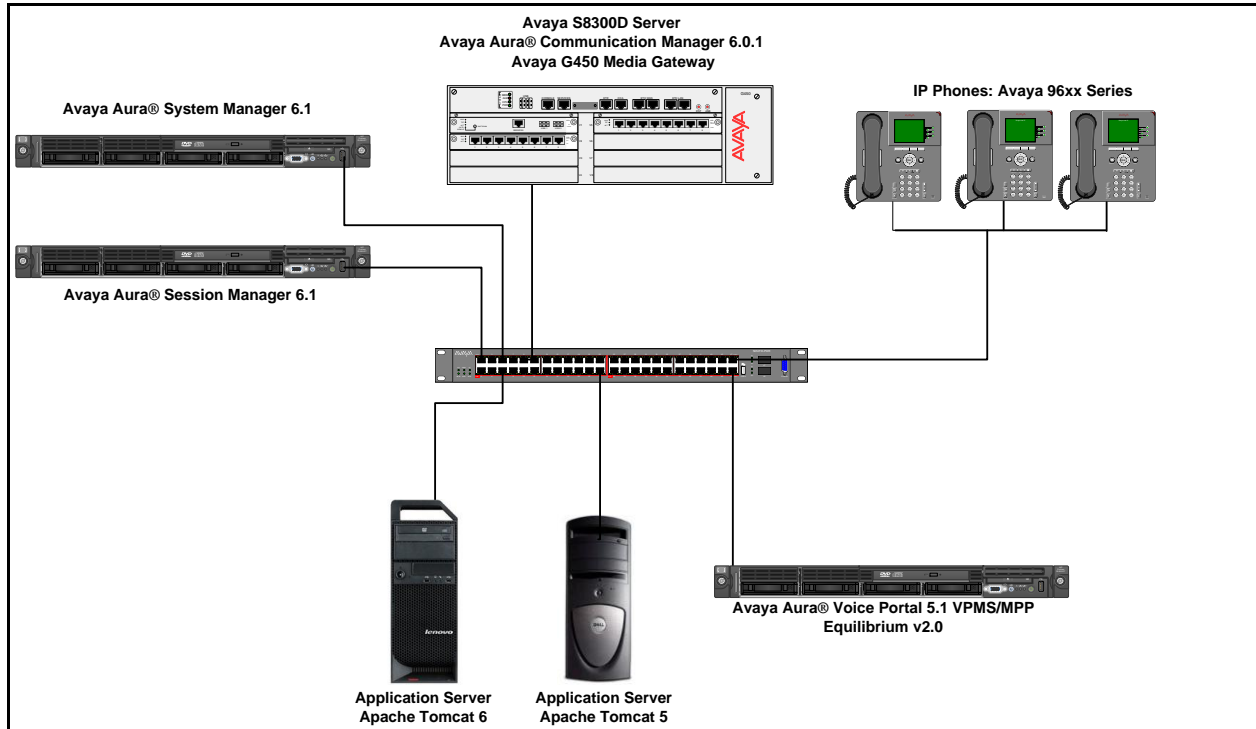


Figure 1: VPMS/MPP on a single server

The following diagram shows the configuration where VPMS and MPP were running on separate servers

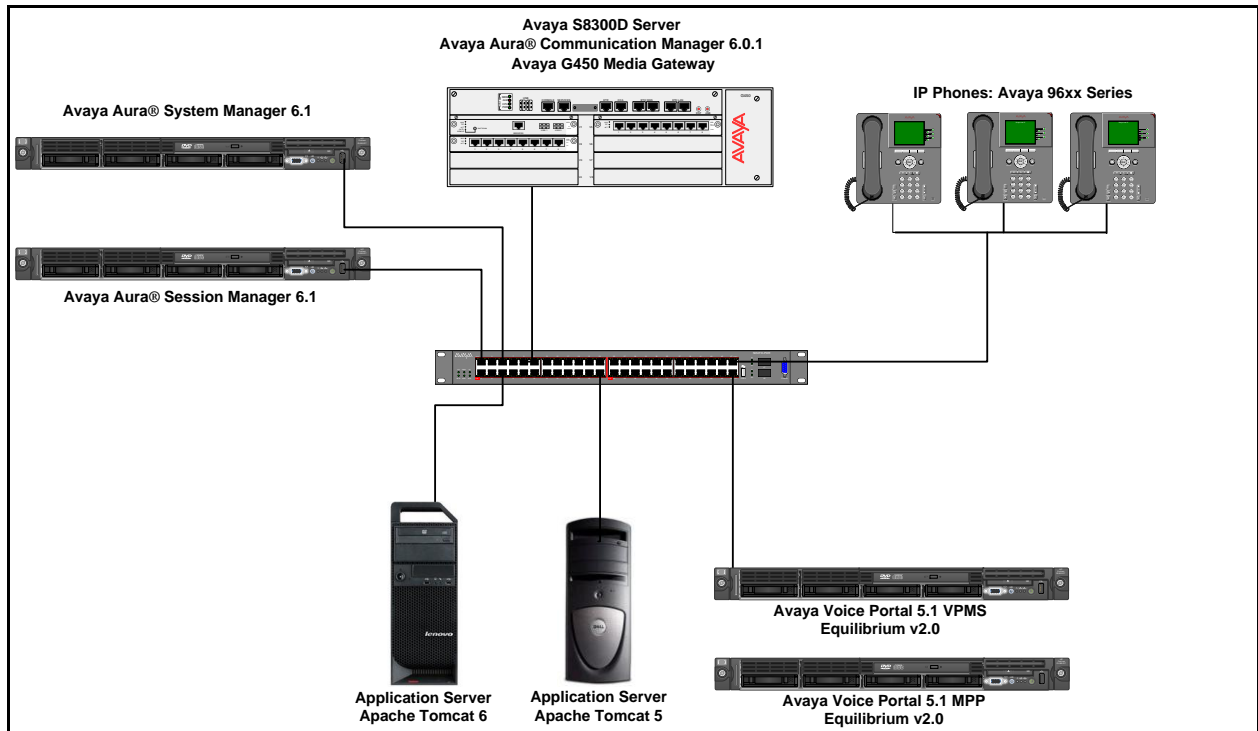


Figure 2: VPMS and MPP on separate servers

3.1. Equipment and Software Validated

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

Equipment/Software	Release/Version
Avaya Voice Portal running on IBM xSeries 306m Server	5.1 (5.1.0.0.4201)
Avaya G450 Media Gateway	31.20.1
Avaya Aura Communication Manager running on Avaya S8300D Server	6.0.1 SP7
Avaya 9600 Series IP Telephones	3.011b (H.323)
INI EQuilibrium ¹	INI-EQ-EPM-2.0.4-1 INI-EQ-MPP-2.0.4-1
Apache Tomcat running on Microsoft Windows 7	6.x
Apache Tomcat running on CentOS 6.2	5.x

¹ The INI EQuilibrium version can be checked by running the “rpm -qa | grep EQ” command on the VPMS and MPP.

4. Install and Configure INI EQuilibrium

This section covers the installation and administration of INI EQuilibrium. The procedures include the following areas:

- INI EQuilibrium Software Installation on VPMS and MPP
- License EQuilibrium
- Configure EQuilibrium to Report Alarms
- Configure Application Servers
- Configure Cluster
- Configure Voice Portal Application

Note: It is assumed that the Voice Portal system has already been installed and configured as described in [1] or [2] and [3].

4.1. INI EQuilibrium Software Installation on VPMS and MPP

The VPMS component should be installed on the primary VPMS and the MPP component should be installed on every MPP. In this example, only one MPP was used. Refer to [4] for more information on the EQuilibrium installation process. Also detailed installation instruction can be found in [4].

Note: The Voice Portal system used in the configuration was using Avaya Enterprise Linux.

4.1.1. Install the VPMS Component

The following procedure installs the VPMS component:

1. SSH to the VPMS server Linux shell with a *root* login.
2. Insert the INI EQuilibrium CDROM into the CDROM drive.
3. Mount the EQuilibrium installation CDROM by entering the `mount /mnt/cdrom` command, where `/mnt/cdrom` is the mount point directory.
4. Change to the mount point directory using the `cd /mnt/cdrom` command.
5. Determine whether Java is installed on the server by entering the `rpm -qa | grep jdk` command. If the package `jdk-1.6.0_18-fcs` is not present, load Java on the VPMS. Change to the `/mnt/cdrom/Java` directory and run the `rpm -ivh jdk*.rpm` command.
6. Enter the `rpm -ivh INI-EQ-VPMS-2.0.4.rpm` command to start the installation.

When the installation completes, the location of the installation log file is provided.

4.1.2. Install the MPP Component

The following procedure installs the MPP component:

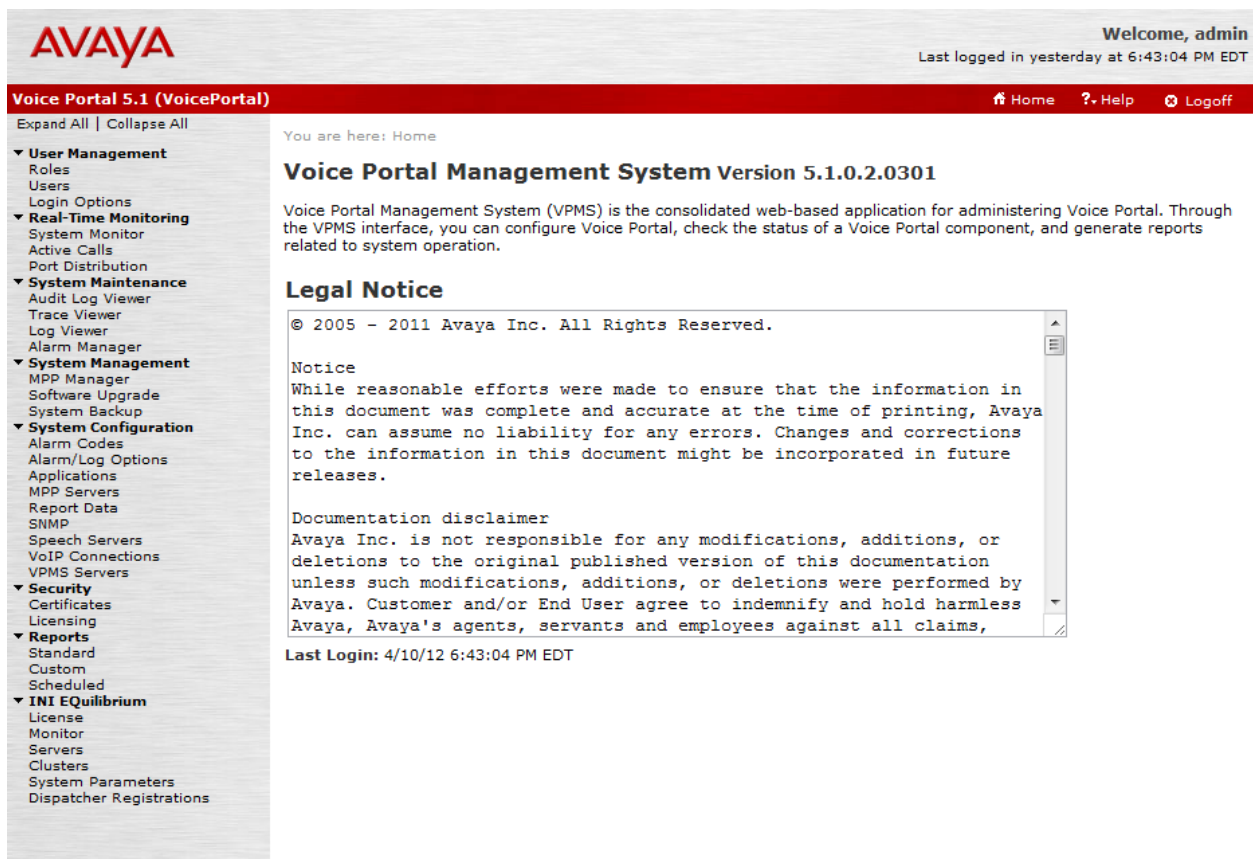
1. SSH to the MPP server Linux shell with a *root* login.
2. Insert the INI EQuilibrium CDROM into the CDROM drive.
3. Mount the EQuilibrium installation CDROM by entering the `mount /mnt/cdrom` command, where `/mnt/cdrom` is the mount point directory.

4. Change to the mount point directory using the `cd /mnt/cdrom` command.
5. Determine whether Java is installed on the server by entering the `rpm -qa | grep jdk` command. If the package `jdk-1.6.0_18-fcs` is not present, load Java on the MPP. Change to the `/mnt/cdrom/Java` directory and run the `rpm -ivh jdk*.rpm` command.
6. Add an entry in the `/etc/hosts` file for the EQVPMS alias. The following entry should be added: `10.64.10.31 EQVPMS`, where `10.64.10.31` is the VPMS IP address.
7. Change to the `/mnt/cdrom` directory and enter the `rpm -ivh INI-EQ-MPP-2.0.4.rpm` command to start the installation.

When the installation completes, the location of the installation log file is provided.

4.2. Configure INI Equilibrium

Equilibrium is configured via the Voice Portal Management System (VPMS) web interface. To access the web interface, enter `http://<ip-addr>/` as the URL in a web browser, where `<ip-addr>` is the IP address of the VPMS. Log in using the Administrator user role. The screen shown below is displayed with the INI Equilibrium menu options in the left pane after the software is installed on the VPMS. Refer to [5] for more information on configuring Equilibrium.



AVAYA Welcome, admin
Last logged in yesterday at 6:43:04 PM EDT

Voice Portal 5.1 (VoicePortal) Home ? Help Logoff
Expand All | Collapse All

You are here: Home

Voice Portal Management System Version 5.1.0.2.0301

Voice Portal Management System (VPMS) is the consolidated web-based application for administering Voice Portal. Through the VPMS interface, you can configure Voice Portal, check the status of a Voice Portal component, and generate reports related to system operation.

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Last Login: 4/10/12 6:43:04 PM EDT

INI Equilibrium

- License
- Monitor
- Servers
- Clusters
- System Parameters
- Dispatcher Registrations

4.2.1. License EQUilibrium

Navigate to **License** under **INI Equilibrium** menu and specify the **License File** (not shown); click **Upload**. After the license has been installed, the screen should display an “INI Equilibrium is licensed to ...” message.

The screenshot shows the Avaya Voice Portal 5.1 (VoicePortal) interface. The top header includes the Avaya logo, a welcome message for 'admin', and the last login time. The left sidebar contains a navigation menu with categories like User Management, Real-Time Monitoring, System Maintenance, System Management, System Configuration, Security, Reports, and INI Equilibrium. The main content area displays the 'Equilibrium License' page, which includes a breadcrumb trail, a description of the page's purpose, the current EQ Version Number (INI-EQ-VPMS-2.0.4), and a confirmation message: 'INI Equilibrium is licensed to Customer Name: Avaya_DevConnect Customer MAC Address: 00:14:5E:83:50:0F'. A 'Help' button is also visible.

AVAYA Welcome, admin
Last logged in yesterday at 6:43:04 PM EDT

Voice Portal 5.1 (VoicePortal) Home ? Help Logoff
Expand All | Collapse All

You are here: [Home](#) > Equilibrium License

Equilibrium License

This page displays the status of the Equilibrium License. If a valid license has not been loaded, an upload form will be displayed.

EQ Version Number: INI-EQ-VPMS-2.0.4

INI Equilibrium is licensed to
Customer Name: Avaya_DevConnect
Customer MAC Address: 00:14:5E:83:50:0F

[Help](#)

4.2.2. Configure EQUilibrium to Report Alarms

After EQUilibrium is licensed, the next step is to configure alarm reporting for EQUilibrium. Select **VPMS Servers** under **System Configuration** in the left pane to display the screen below. Click on the **VPMS Settings** button to display the **VPMS Settings** screen.

The screenshot displays the Avaya Voice Portal 5.1 (VoicePortal) web interface. The top header shows the Avaya logo and a welcome message for 'admin', indicating the last login was yesterday at 6:43:04 PM EDT. The left navigation pane lists various system management categories, with 'System Configuration' expanded to show 'VPMS Servers'. The main content area, titled 'VPMS Servers', explains that it displays the list of primary and auxiliary VPMS servers. It features a table with columns for Name, Type, and Host Address, showing a single entry: 'VPMS' with type 'Primary' and value 'vpms'. Below the table are 'Add' and 'Delete' buttons. At the bottom of the main area, there are five buttons: 'VPMS Settings' (highlighted), 'Email Servers', 'Report DB Settings', 'Syslog Settings', and 'Help'.

AVAYA Welcome, admin
Last logged in yesterday at 6:43:04 PM EDT

Voice Portal 5.1 (VoicePortal) Home ? Help Logoff
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You are here: [Home](#) > System Configuration > VPMS Servers

VPMS Servers

This page displays the list of primary and auxiliary VPMS servers in the Voice Portal system.

Name	Type	Host Address
VPMS	Primary	vpms

Add Delete

VPMS Settings **Email Servers** **Report DB Settings** **Syslog Settings** **Help**

In the **VPMS Settings** screen, specify a **User Name** and **Password** under **Application Reporting** as shown below. Click **Save**.

AVAYA

Welcome, admin
Last logged in yesterday at 6:43:04 PM EDT

Voice Portal 5.1 (VoicePortal)

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You are here: Home > System Configuration > VPMS Servers > VPMS Settings

VPMS Settings

Use this page to configure system parameters that affect the Voice Portal system.

Voice Portal Name:

VoicePortal

Number of Application Server Failover Logs :

10

Commands to Retain in MPP Configuration History:

50

Resource Alerting Thresholds (%)

High Water

Low Water

Disk:

90

80

Web Service Authentication

Application Reporting

User Name:

equilibrium

Password:

.....

Verify Password:

.....

Outcall

User Name:

Password:

Verify Password:

Save

Apply

Cancel

Help

Next, configure the same **User Name** and **Password** in EQuilibrium. Select **System Parameters** under **INI EQuilibrium** in the left pane and specify **VP WS Username** and **VP WS Password** as shown below. Click **Save**.

The screenshot shows the Avaya Voice Portal 5.1 (VoicePortal) interface. The top header includes the Avaya logo, a welcome message for 'admin', and the last login time. The left navigation pane lists various system management options, with 'INI EQuilibrium' expanded. The main content area displays the 'EQuilibrium System Parameters' page, which includes a breadcrumb trail, a description of the page's purpose, and a form for configuring system parameters. The form fields are as follows:

VP WS Username :	equilibrium
VP WS Password :	*****
Email Smart Host:	
Email User:	
Email Password:	
Email Recipients:	

At the bottom of the form are 'Save' and 'Help' buttons.

4.2.3. Configure Application Servers

Click on **Servers** under **INI Equilibrium**. In the **Equilibrium Servers** screen (not shown), click on the **Add** button. The **Add Equilibrium Server** screen is displayed. Configure the following fields:

- Name:** Specify a descriptive name for the application server (e.g., *AES1*).
- Protocol:** This is the protocol used when Equilibrium redirects the page fetch to the application server. In this example, *http* was used.
- DNS Name/IP:** This is the IP address of the application server (e.g., *10.64.10.53*).
- Port:** This field specifies the http port used by the application server running Apache Tomcat (e.g., *8080*).
- Preferred State:** This selection indicates the state the application server is placed into when the Equilibrium Dispatcher initializes.
- Health Check Path:** This is the URL path to the health check application on the application server. When a forward-slash (/) is used, the root node of the application server will be polled. As long as the application server is alive, the root node should respond and the application will be considered online. However, a special health check application may be used.

After the Equilibrium server is configured, click **Save**.

The screenshot displays the Avaya Voice Portal 5.1 (VoicePortal) interface. The top header includes the Avaya logo, a welcome message for 'admin', and the last login time. The left sidebar contains a navigation menu with categories like User Management, Real-Time Monitoring, System Maintenance, System Management, System Configuration, Security, Reports, and INI Equilibrium. The main content area shows the 'Add Equilibrium Server' page, which includes a breadcrumb trail, a description, and a form with fields for Name, Protocol, DNS Name/IP, Port, Preferred State, and Health Check Path. The form is pre-filled with 'AES1', 'http', '10.64.10.53', '8080', 'In Service', and '/'. At the bottom of the form are buttons for Save, Apply, Cancel, and Help.

AVAYA Welcome, admin
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Voice Portal 5.1 (VoicePortal) Home ? Help Logoff

Expand All | Collapse All

- ▼ **User Management**
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You are here: [Home](#) > [EQ Servers](#) > Modify Equilibrium Server EQ Server

Add Equilibrium Server

Use this page to modify the configuration of an EQ server.

Name : AES1

Protocol : http

DNS Name/IP : 10.64.10.53

Port : 8080

Preferred State : In Service

Health Check Path : /

Save Apply Cancel Help

Repeat the above procedure for the second application server. Once the application servers have been configured, they will be listed in the **EQilibrium Servers** screen shown below.

Expand All | Collapse All

- ▼ **User Management**
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You are here: [Home](#) > EQilibrium Servers

EQilibrium Servers

This page displays the list of EQ servers. When a cluster receives a call, it will send the call to an available application server based upon the defined dispatch method for the cluster.

Server Name	Base URI	Health Check Webapp
AES1	http://10.64.10.53:8080 /	Delete
AES2	http://10.64.10.192:8080 /	Delete

Add
Help

4.2.4. Configure Cluster

To create a cluster that groups application servers, click on **Clusters** under **INI EQilibrium**. In the **EQilibrium Clusters** screen (not shown), click on the **Add** button. The **EQilibrium Cluster Information** screen is displayed. Provide a descriptive name for the cluster and select a **Dispatch Method**, such as *Ordered*, *Round-Robin*, or *Random*, as shown below. Refer to [5] for a description of the dispatch methods. Accept the default values for other fields or fine-tune according to customer requirements. Click **Next**.

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You are here: [Home](#) > [EQ Clusters](#) > EQilibrium Cluster Information

EQilibrium Cluster Information

Use this page to modify the configuration of an EQ cluster.

Name :

CA

Dispatch Method :

Ordered ▼

Health Check Frequency (ms) :

5000

Health Check Timeout (ms) :

5000

Offline Check Loops :

60

Next
Finish
Cancel
Help

In the **Equilibrium Cluster Server Assignments** screen shown below, select the application servers to be added to this cluster. Click **Finish**.

In this example, the *Ordered* dispatch method was used (see previous screen). This means that page fetch requests are distributed to application servers based upon the listed order. If the first server is available, the call will be routed to that server.

The screenshot displays the Avaya Voice Portal 5.1 (VoicePortal) interface. At the top, the Avaya logo is on the left, and the user's name 'Welcome, admin' and last login time 'Last logged in yesterday at 6:43:04 PM EDT' are on the right. Below the header, a red navigation bar contains 'Voice Portal 5.1 (VoicePortal)', 'Home', 'Help', and 'Logoff' links. A left-hand navigation menu lists various system management options, including 'User Management', 'Real-Time Monitoring', 'System Maintenance', 'System Management', 'System Configuration', 'Security', 'Reports', and 'INI Equilibrium'. The main content area is titled 'Equilibrium Cluster Server Assignments' and includes a breadcrumb trail: 'You are here: Home > EQ Cluster > Equilibrium Cluster Server Assignments'. Below the title, a sub-header reads 'Use this page to assign EQ servers to the EQ cluster.' The interface features two vertical lists: 'Available Servers' (currently empty) and 'Assigned Servers' (containing 'AES1' and 'AES2'). Between these lists are four directional buttons: '<-', '->', '<<--', and '-->>'. At the bottom of the 'Assigned Servers' list are 'v' and '^' icons. A row of buttons at the bottom includes 'Previous', 'Finish', 'Cancel', and 'Help'.

4.2.5. Configure Voice Portal Application

Once EQuilibrium has been installed and configured, EQuilibrium is ready to provide application dispatch. This section covers the configuration of a Voice Portal application that uses EQuilibrium. On the left pane, navigate to **Applications** under **System Configuration** (not shown).

- Click on an application that needs to be configured
- Change the application URL to point to EQuilibrium, example:

<http://localhost:9090/MultilingualHelloWorld/Start?EQID=CA>

This example points out two things. First, the URL for this application points to “localhost:9090”, meaning that EQUilibrium listens to port 9090 on the local MPP (“localhost”). Secondly, the URL requires the EQID parameter that specifies the name of the cluster. In this example, the name of the cluster is “CA”. If desired, a second fail-over URL may be configured in the application that will be used if the application servers in the specified cluster are not available.

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You are here: [Home](#) > [System Configuration](#) > [Applications](#) > Change Application

Change Application

Use this page to change the configuration of a VoiceXML or CCXML application.

Name: MHW_CA

Enable: ☒ Yes ☐ No

Type:

URL

☐ Single ☒ Fail Over ☐ Load Balance

VoiceXML URL1:

VoiceXML URL2:

Mutual Certificate Authentication: ☐ Yes ☒ No

Basic Authentication: ☐ Yes ☒ No

Speech Servers

ASR: TTS:

English(USA) en-US English(USA) en-US Jennifer F

Languages: Voices:

Application Launch

☒ Inbound ☐ Inbound Default ☐ Outbound

☒ Number ☐ Number Range ☐ URI

Called Number:

69981

Speech Parameters >

Reporting Parameters >

Advanced Parameters >

Save Apply Cancel Help

5. Verification Steps

This section provides the verification steps that may be performed to verify that EQuilibrium is able to dispatch applications to the application servers under its control.

1. Verify that the EQuilibrium cluster is **ONLINE** and that the EQuilibrium Dispatcher is **RUNNING** on the MPP as shown in the **EQuilibrium Monitor** below. This screen is accessible by clicking on **Monitor** under **INI EQuilibrium**.

AVAYA Welcome, admin
Last logged in yesterday at 6:43:04 PM EDT

Voice Portal 5.1 (VoicePortal) Home Help Logoff

Expand All | Collapse All

INI EQuilibrium

You are here: [Home](#) > EQuilibrium Monitor

EQuilibrium Monitor

This page displays the current state of EQ dispatchers and clusters. Click on any EQ cluster name for the status of each of the servers assigned to that cluster. NOTE: Changes to clusters or dispatchers may take up to 2 minutes to display the changes.

Clusters

Cluster Name	Current State
CA	ONLINE
CB	ONLINE

Dispatchers

Host Name	Host IP	Current State
mpp1	10.64.10.32	RUNNING

[Help](#)

- From the **Equilibrium Monitor**, click on the cluster name (e.g., CA) to check the status of the individual application servers in the cluster. The state of each application server should be **ONLINE** as shown below. The application servers can be placed in maintenance mode from this screen.

The screenshot shows the Avaya Voice Portal 5.1 (VoicePortal) interface. The top header includes the Avaya logo, a welcome message for 'admin', and the last login time 'Last logged in yesterday at 6:43:04 PM EDT'. The main navigation bar shows 'Voice Portal 5.1 (VoicePortal)' and links for Home, Help, and Logoff. A left sidebar contains a tree view of navigation options: User Management, Real-Time Monitoring, System Maintenance, System Management, and System Configuration. The main content area is titled 'Equilibrium Monitor - Servers' and includes a breadcrumb trail: 'You are here: Home > EQ Monitor > Equilibrium Monitor - Servers'. Below the title, a paragraph explains the page's function and provides instructions on how to place a server into maintenance mode or return it to service. A table displays the current state of EQ servers for cluster CA, showing two servers (AES1 and AES2) both in an 'ONLINE' state. Each server row has a green status indicator and a 'Maintenance On' link. A 'Help' button is located below the table.

AVAYA Welcome, admin
Last logged in yesterday at 6:43:04 PM EDT

Voice Portal 5.1 (VoicePortal) Home Help Logoff

Expand All | Collapse All

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- ▼ **Real-Time Monitoring**
 - System Monitor
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 - Port Distribution
- ▼ **System Maintenance**
 - Audit Log Viewer
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 - Log Viewer
 - Alarm Manager
- ▼ **System Management**
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 - Software Upgrade
 - System Backup
- ▼ **System Configuration**
 - Alarm Codes
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 - Applications
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 - Report Data

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Equilibrium Monitor - Servers

This page displays the current state of EQ servers assigned to the selected cluster. To place a server into maintenance mode, click the Maintenance On link to the right of the selected server. To return a server into service from maintenance mode, click the Maintenance Off link to the right of the selected server. NOTE: Changes to servers or server state may take up to 2 minutes to display the changes.

Cluster: CA

Server Name	Last Health Check	Current State	Change State
AES1	2012-04-11 18:01:01	ONLINE	Maintenance On
AES2	2012-04-11 18:01:01	ONLINE	Maintenance On

[Help](#)

- If any application server controlled by EQUilibrium is not available, an alarm will be raised. The Voice Portal Alarm Report may be checked for alarms and will be displayed as shown below. To view alarms, on the left pane, navigate to **System Monitor** under **Real-Time Monitoring**, and select icon under **Alarm** column and **Summary** row (now shown). On the next page, select icon under **Summary** column and **All Categories** row (now shown).

Welcome, admin
Last logged in yesterday at 6:43:04 PM EDT

Voice Portal 5.1 (VoicePortal)
Home Help Logoff

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VPMS Servers
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Reports
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You are here: [Home](#) > [Real-Time Monitoring](#) > [System Monitor](#) > [Voice Portal Alarm Monitor](#) > Alarm Report

Alarm Report

This page displays the alarms that have been generated in one or more Voice Portal system components. An alarm indicates that there is a problem with your Voice Portal system.

Page 1 of 1 Total Records: 6

	Timestamp	Alarm Status	Server Name	Category	Alarm Severity	Alarm Code	Event Code	Alarm Message
<input type="checkbox"/>	4/11/12 6:06:39 PM	UNACK	VPMS	VP Application Logger	Critical	QAPP_00003	PAPP_00003	QAPP_00003: Application generated a Critical alarm.
<input type="checkbox"/>	4/11/12 6:06:39 PM	UNACK	VPMS	VP Application Logger	Major	QAPP_00002	PAPP_00002	QAPP_00002: Application generated a Major alarm.
<input type="checkbox"/>	4/11/12 6:06:38 PM	UNACK	VPMS	VP Application Logger	Major	QAPP_00002	PAPP_00002	QAPP_00002: Application generated a Major alarm.
<input type="checkbox"/>	4/11/12 6:06:38 PM	UNACK	VPMS	VP Application Logger	Major	QAPP_00002	PAPP_00002	QAPP_00002: Application generated a Major alarm.
<input type="checkbox"/>	4/11/12 6:06:38 PM	UNACK	VPMS	VP Application Logger	Critical	QAPP_00003	PAPP_00003	QAPP_00003: Application generated a Critical alarm.
<input type="checkbox"/>	4/11/12 6:06:38 PM	UNACK	VPMS	VP Application Logger	Major	QAPP_00002	PAPP_00002	QAPP_00002: Application generated a Major alarm.

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Change Alarm Status

☒ Selected alarms on this page
☐ All alarms on this report

New Status: ACK

Submit

Help

- Clicking on the **Event Code** of an active alarm (see previous screen) will display more information about the alarm, such as which application server or cluster changed state. The following screen displays the log report for an event.

Log Report for Event PAPP_00003



This page displays the events that are associated with an alarm.

Alarm Code: QAPP_00003
Associated Event Code: PAPP_00003
Event Count: 1
4/11/12 6:06:39 PM

Page 1 of 1

4/11/12 6:06:39 PM EDT to 4/11/12 6:06:39 PM EDT

Timestamp	Server Name	Category	Event Severity	Event Code	Event Message
4/11/12 6:06:39 PM	VPMS	VP Application Logger	Fatal	<u>PAPP_00003</u>	Application EQUilibrium reported an error from AES2, Session ID: none at Apr 11, 2012 6:06:33 PM EDT with message: Server AES2 has entered a state of OFFLINE, Server check failed after 15 because of an IO error:...

Method=VPReport4SoapBindingImpl::logApplicationEventAlarm

Page 1 of 1

4/11/12 6:06:39 PM EDT to 4/11/12 6:06:39 PM EDT

Help

- Assuming that all application servers and clusters are online, place a call to Voice Portal that invokes an application that uses EQUilibrium. Verify that EQUilibrium dispatches the application to an available application server in the specified cluster. To verify that the appropriate application server was used according to the cluster dispatch method, on the left pane, navigate to **Reports → Standard → Session Details**.

6. Conclusion

These Application Notes describe the configuration steps required to integrate INI EQuilibrium with Avaya Voice Portal for performing load-balancing across the available application servers. All feature and serviceability test cases were completed successfully.

7. Additional References

This section references the Avaya documentation relevant to these Application Notes. The following Avaya product documentation is available at <http://support.avaya.com>.

- [1] *Implementing Voice Portal on multiple servers*, March 2012.
- [2] *Implementing Voice Portal on single servers*, March 2012.
- [3] *Administering Voice Portal*, January 2011.

The following EQuilibrium documentation is available from INI.

- [4] *INI EQuilibrium Installation Guide*, Revision 2.0.4, 10/20/2011.
- [5] *INI EQuilibrium Administrator's Guide*, Revision 2.0.4, 10/20/2011.

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