Progress®
Kemp® LoadMaster®

Deployment Guide AirWatch

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Introduction

AirWatch is a VMware Enterprise Mobility Management (EMM) software product, which allows an enterprise's employees and associates use mobile devices. When deployed with LoadMasters, AirWatch is secure, multi-tenant, highly scalable and can be integrated with existing enterprise systems, be they on-site or in the cloud. AirWatch supports all major mobile players including; Apple iOS, Android, Symbian and Windows Phone.

Users require confidence that the service is available when needed. LoadMasters help provide reliability. When deployed as a pair, two LoadMasters give the security of High Availability (HA). HA allows two physical or virtual machines to become one logical device. Only one of these units is ever handling traffic at any particular moment. One unit is active and the other is a hot standby (passive). This provides redundancy and resiliency, meaning if one LoadMaster goes down for any reason, the hot standby can become active, therefore avoiding any downtime. For more information on HA please refer to the High Availability (HA), Feature Description.

Related Links

For details, see the following topics:

- Document Purpose
- Intended Audience
- Architecture

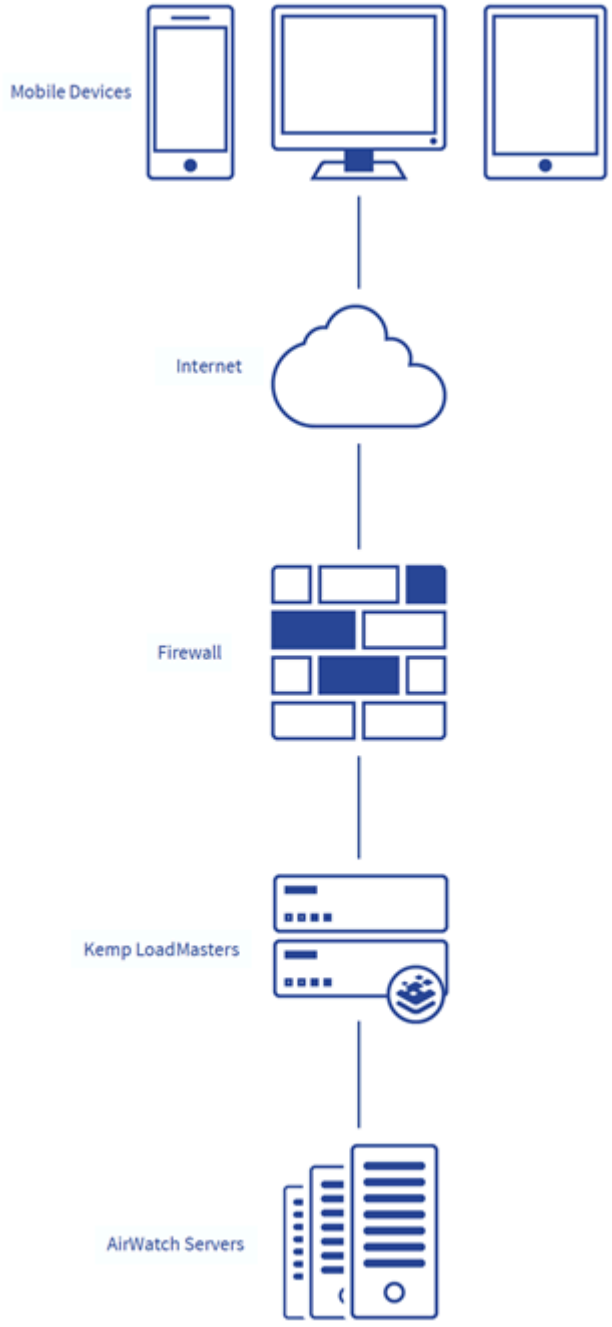
Document Purpose

This document provides guidance on deploying AirWatch with a LoadMaster. The Progress Kemp Support Team is available to provide solutions for scenarios not explicitly defined. For further details, refer to the: LoadMaster Support and Learning Hub.

Intended Audience

This document is for anyone deploying AirWatch with a LoadMaster.

Architecture



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Template

Progress Kemp has developed a template containing our recommended settings for this workload. You can install this template to help create Virtual Services (VSs) because it automatically populates the settings. You can use the template to easily create the required VSs with the recommended settings. For some workloads, additional manual steps may be required such as assigning a certificate or applying port following. These steps are covered in the document, if needed.

You can remove templates after use and this will not affect deployed services. If needed, you can make changes to any of the VS settings after using the template.

Download released templates from the following page: LoadMaster Templates.

For more information and steps on how to import and use templates, refer to the Virtual Services and Templates, Feature Description.

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Configure the LoadMaster

The following sections provide step-by-step instructions on how to configure a LoadMaster to load balance the AirWatch workload.

Related Links

For details, see the following topics:

- Enable Subnet Originating Requests Globally
- Configure AirWatch Mobile Access Gateway (MAG) Virtual Services
- Configure an AirWatch Secure Email Gateway (SEG) Virtual Service

Enable Subnet Originating Requests Globally

It is best practice to enable the **Subnet Originating Requests** option globally.

In a one-armed setup (where the Virtual Service and Real Servers are on the same network/subnet) **Subnet Originating Requests** is usually not needed. However, enabling **Subnet Originating Requests** should not affect the routing in a one-armed setup.

In a two-armed setup where the Virtual Service is on network/subnet A, for example, and the Real Servers are on network B, **Subnet Originating Requests** should be enabled on LoadMasters with firmware version 7.1-16 and above.



When **Subnet Originating Requests** is enabled, the Real Server sees traffic originating from 10.20.20.21 (LoadMaster eth1 address) and responds correctly in most scenarios.

With **Subnet Originating Requests** disabled, the Real Server sees traffic originating from 10.0.0.15 (LoadMaster Virtual Service address on **eth0**) and responds to **eth0** which could cause asymmetric routing.

When **Subnet Originating Requests** is enabled globally, it is automatically enabled on all Virtual Services. If the **Subnet Originating Requests** option is disabled globally, you can choose whether to enable **Subnet Originating Requests** on a per-Virtual Service basis.

To enable **Subnet Originating Requests** globally, follow the steps below:

1. In the main menu of the LoadMaster User Interface (UI), go to **System Configuration > Miscellaneous Options > Network Options**.
2. Select the **Subnet Originating Requests** check box.

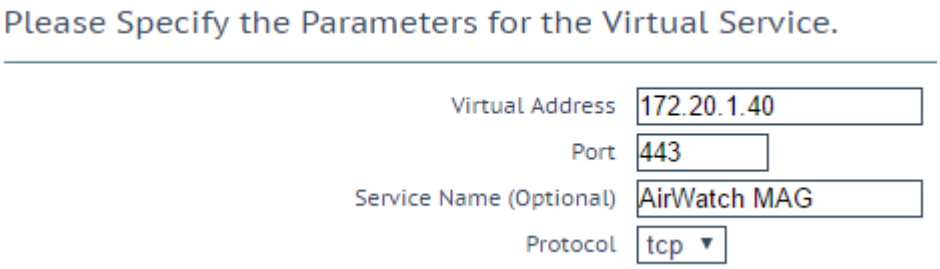
Configure AirWatch Mobile Access Gateway (MAG) Virtual Services

When configuring the LoadMaster to load balance AirWatch MAG, three Virtual Services must be set up.

Configure AirWatch MAG Virtual Service

The following are the steps involved and the recommended settings to configure an AirWatch MAG Virtual Service:

1. In the main menu of the LoadMaster Web User Interface (WUI), go to **Virtual Services > Add New**.



2. Enter a valid IP address in the **Virtual Address** text box.
3. Enter **443** in the **Port** text box.

4. Enter a recognizable **Service Name**, for example **AirWatch MAG**.
5. Ensure **tcp** is selected as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Configure the settings as recommended in the following table:

Section	Option	Value	Comment
Standard Options	Transparency	Disabled	
	Persistence Mode	Source IP Address	
	Timeout	30 Minutes	
	Scheduling Method	round robin	
	Idle Connection Timeout	3600	Click **Set Idle Timeout**.
Real Servers	Real Server Check Parameters	HTTPS Protocol	
	HTTP Method	HEAD	Click the **Add New** button

8. Add the Real Servers.
   1. Enter the IP address of the AirWatch server.
   2. Enter **443** as the **Port**.

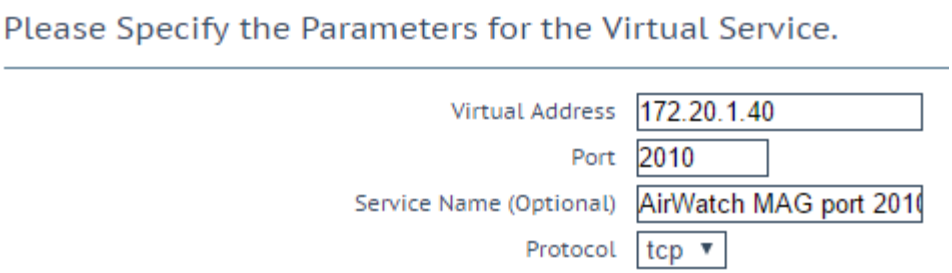
      Note: The **Forwarding method** and **Weight** values are set by default. An administrator can change these.

   3. Click **Add this Real Server**. Click **OK** to the pop-up message.
   4. Repeat steps **a)** to **c)** above to add more Real Servers as needed, based on the environment.

Configure AirWatch MAG Port 2010 Virtual Services

The following are the steps involved and the recommended settings to configure an AirWatch MAG port 2010 Virtual Service:

1. In the main menu of the LoadMaster WUI, go to **Virtual Services > Add New**.



2. Enter a valid IP address in the **Virtual Address** text box.
3. Enter **2010** in the **Port** text box.
4. Enter a recognizable **Service Name**, for example **AirWatch MAG port 2010**.
5. Ensure **tcp** is selected as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Configure the settings as recommended in the following table:

Section	Option	Value	Comment
Standard Options	Transparency	Disabled	
	Server Initiating Protocols	Normal Protocols	
	Persistence Options	Source IP Address	
	Timeout	30 Minutes	
	Scheduling Method	round robin	
	Idle Connection Timeout	3600	Click **Set Idle Timeout**.
Real Servers	Real Server Check Parameters	TCP Connection Only	
	Checked Port	2010	Click **Set Checked Port**.

8. Add the Real Servers.
   1. Enter the IP address of the AirWatch server.
   2. Enter **2010** as the **Port**.

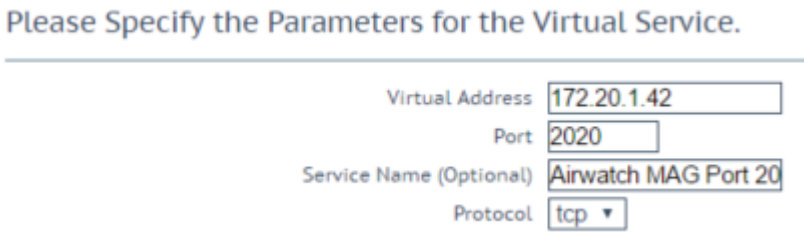
Note: The **Forwarding method** and **Weight** values are set by default. An administrator can change these.

3. Click **Add this Real Server**. Click **OK** to the pop-up message.
4. Repeat steps **a)** to **c)** above to add more Real Servers as needed, based on the environment.

Configure AirWatch MAG Port 2020 Virtual Service

The following are the steps involved and the recommended settings to configure an AirWatch MAG port 2020 Virtual Service:

1. In the main menu of the LoadMaster WUI, go to **Virtual Services > Add New**.



2. Enter a valid IP address in the **Virtual Address** text box.
3. Enter **2020** in the **Port** text box.
4. Enter a recognizable **Service Name**, for example **AirWatch MAG Port 2020**.
5. Ensure **tcp** is selected as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Configure the settings as recommended in the following table:

Section	Option	Value	Comment
Standard Options	Transparency	Disabled	
	Server Initiating Protocols	Normal Protocols	
	Persistence Options	Source IP Address	
	Timeout	30 Minutes	

Section	Option	Value	Comment
	Scheduling Method	round robin	
	Idle Connection Timeout	3600	Click **Set Idle Timeout**.
Real Servers	Real Server Check Parameters	TCP Connection Only	
	Checked Port	2020	Click **Set Checked Port** then click the **Add New** button.

8. Add Real Servers.
   1. Enter the IP address of the AirWatch server.
   2. Enter **2020** as the **Port**.

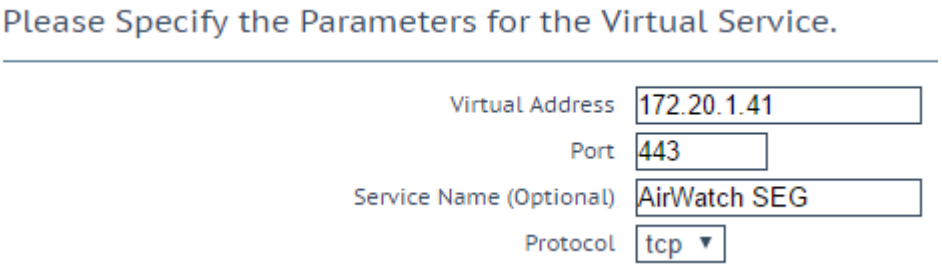
      Note: The **Forwarding method** and **Weight** values are set by default. An administrator can change these.

   3. Click **Add this Real Server**. Click **OK** to the pop-up message.
   4. Repeat steps **a)** to **c)** above to add more Real Servers as needed, based on the environment.

Configure an AirWatch Secure Email Gateway (SEG) Virtual Service

The following are the steps involved and the recommended settings to configure an AirWatch SEG Virtual Service:

1. In the main menu of the LoadMaster Web User Interface (WUI), go to **Virtual Services > Add New**.



2. Enter a valid IP address in the **Virtual Address** text box.
3. Enter **443** in the **Port** text box.

4. Enter a recognizable **Service Name**, for example **AirWatch SEG**.
5. Ensure **tcp** is selected as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Configure the settings as recommended in the following table:

Section	Option	Value	Comment
Standard Options	Force L4	Clear	
	Transparency	Clear	
	Persistence Options	Source IP Address	
	Timeout	30 Minutes	
	Scheduling Method	round robin	
Real Servers	Real Server Check Parameters	HTTPS Protocol	
	HTTP Method	Head	Click the **Add New** button.

8. Add the Real Servers:
   1. Enter the IP address of the AirWatch server.
   2. Enter **443** as the **Port**.

      Note: The **Forwarding method** and **Weight** values are set by default. An administrator can change these.

   3. Click **Add this Real Server**. Click **OK** to the pop-up message.
   4. Repeat steps **a)** to **c)** above to add more Real Servers as needed, based on the environment.

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References

Unless otherwise specified, the following documents can be found at: https://docs.progress.com/.

Virtual Services and Templates, Feature Description.

High Availability (HA), Feature Description