



# **SunGard eSchool**

## **Deployment Guide**

*UPDATED: 13 October 2017*

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### 1 Introduction

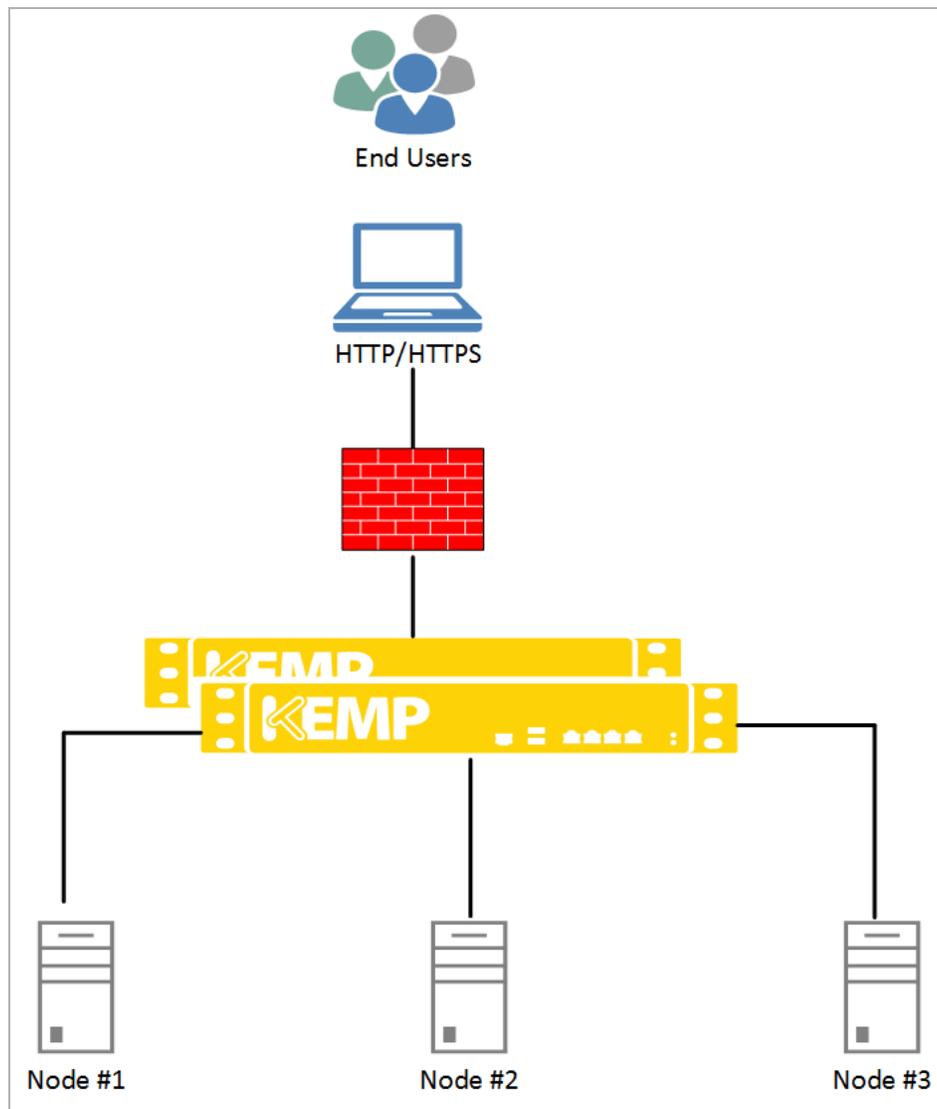
SunGard eSchool is a student information system that manages student information throughout their entire educational career.

The KEMP LoadMaster is used to load balance the SunGard eSchool Server workload. The LoadMaster offers advanced Layer 4 and Layer 7 server load balancing, SSL Acceleration and a multitude of other advanced Application Delivery Controller (ADC) features. The LoadMaster intelligently and efficiently distributes user traffic among the application servers so that users get the best experience possible.

#### 1.1 Document Purpose

This deployment guide provides instructions on how to configure the KEMP LoadMaster to load balance the SunGard eSchool Server.

## 2 Architecture



### 3 Configure the LoadMaster

The deployed SunGard environment determines which of the following setups is used.

#### 3.1 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 LoadMaster will route traffic so that the Real Server will see traffic arriving from the LoadMaster interface that is in that network/subnet not the Virtual Service address.

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 or not 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 Web User Interface (WUI), go to **System Configuration > Miscellaneous Options > Network Options**.
2. Tick the **Subnet Originating Requests** check box.

#### 3.2 Create the SunGard eSchool Virtual Services

The following sections describe the recommended settings for the SunGard eSchool Virtual Services.

##### 3.2.1 Create a SunGard eSchool HTTPS Virtual Service

The following are the steps involved and the recommended settings to configure the SunGard eSchool HTTPS Virtual Service:

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

**Please Specify the Parameters for the Virtual Service.**

---

Virtual Address

Port

Service Name (Optional)

Use Template  ▼

Protocol  ▼

---

2. Type a valid **Virtual Address**.
3. Type **443** as the **Port**.
4. Enter a recognizable **Service Name**, such as **SunGard eSchool HTTPS**.
5. Select **tcp** as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Configure the settings as shown in the following table:

Section	Option	Value	Comments
<b>Standard Options</b>	Persistence Mode	Active Cookie	You must have SSL acceleration enabled first.
	Timeout	6 Hours	
	Cookie name	PowerSchool_SSL	
	Scheduling Method	least connection	
<b>SSL Properties</b>	SSL Acceleration	Enabled	
	Cipher Set	BestPractices	
<b>Advanced Properties</b>	Add a Port 80 Redirector VS	https://%h%s	Click <b>Add HTTP Redirector</b> . This automatically creates

Section	Option	Value	Comments
			a redirect on port 80.
<b>Real Servers</b>	URL	/admin/pw.html	
	Use HTTP/1.1	Selected	

8. Add the Real Servers:

- a) Expand the **Real Servers** section.
- b) Click **Add New**.
- c) Enter the address of the relevant Real Server.
- d) Complete the other fields as required.
- e) Click **Add this Real Server** then click **OK** to the pop-up message.
- f) Repeat the steps above to add more Real Servers as needed, based on your environment.

### Create a SunGard eSchool HTTPS Redirect Virtual Service

Clicking the **Add HTTP Redirector** button automatically creates a port 80 redirect Virtual Service. This is optional, but the purpose of this **Virtual Service** is to redirect any clients who have connected using HTTP to the HTTPS Virtual Service. KEMP also recommends changing the **Persistence Mode** and **Real Server Check Method** to **None**.

### 3.2.2 Create a SunGard eSchool Database ODBC Virtual Service

The following are the steps involved and the recommended settings to configure the SunGard eSchool Database ODBC Virtual Service:

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

**Please Specify the Parameters for the Virtual Service.**

---

Virtual Address

Port

Service Name (Optional)

Use Template  ▼

Protocol  ▼

---

2. Type a valid **Virtual Address**.
3. Type **1521** as the **Port**.
4. Enter a recognizable **Service Name**, such as **SunGard eSchool Database ODBC**.
5. Select **tcp** as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Configure the settings as shown in the following table:

Section	Option	Value
<b>Standard Options</b>	Force L4	Enabled
	Persistence Mode	Source IP Address
	Timeout	8 Hours
	Scheduling Method	least connection

8. Add the Real Servers:
  - a) Expand the **Real Servers** section.
  - b) Click **Add New**.
  - c) Enter the address of the relevant Real Server.
  - d) Complete the other fields as required.

- e) Click **Add this Real Server** then click **OK** to the pop-up message.
- f) Repeat the steps above to add more Real Servers as needed, based on your environment.

### 3.2.3 Create a SunGard eSchool Database RDP Virtual Service

The following are the steps involved and the recommended settings to configure the SunGard eSchool Database RDP Virtual Service:

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

**Please Specify the Parameters for the Virtual Service.**

---

Virtual Address

Port

Service Name (Optional)

Use Template

Protocol

---

2. Type a valid **Virtual Address**.
3. Type **3389** as the **Port**.
4. Enter a recognizable **Service Name**, such as **SunGard eSchool Database RDP**.
5. Select **tcp** as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Configure the settings as shown in the following table:

Section	Option	Value
Standard Options	Transparency	Enabled
	Persistence Mode Timeout	4 Hours
	Scheduling Method	least connection

8. Add the Real Servers:

- a) Expand the **Real Servers** section.
- b) Click **Add New**.
- c) Enter the address of the relevant Real Server.
- d) Complete the other fields as required.
- e) Click **Add this Real Server** then click **OK** to the pop-up message.
- f) Repeat the steps above to add more Real Servers as needed, based on your environment.

### 3.2.4 Create a SunGard eSchool Database Images Virtual Service

The following are the steps involved and the recommended settings to configure the SunGard eSchool Database Images Virtual Service:

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

**Please Specify the Parameters for the Virtual Service.**

---

Virtual Address	<input type="text" value="10.154.11.186"/>
Port	<input type="text" value="443"/>
Service Name (Optional)	<input type="text" value="SunGard eSchool Da"/>
Use Template	<input type="text" value="Select a Template"/>
Protocol	<input type="text" value="tcp"/>

---

2. Type a valid **Virtual Address**.
3. Type **443** as the **Port**.
4. Enter a recognizable **Service Name**, such as **SunGard eSchool Database Images**.
5. Select **tcp** as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Configure the settings as shown in the following table:

Section	Option	Value	Comments
<b>Standard Options</b>	Persistence Mode	Active Cookie	You must have SSL Acceleration enabled
	Timeout	6 Minutes	
	Cookie name	PowerSchool_Images	
<b>SSL Properties</b>	SSL Acceleration	Enabled	
	Cipher Set	BestPractices	
<b>Real Servers</b>	Checked Port	80	

8. Add the Real Servers:

- a) Expand the **Real Servers** section.
- b) Click **Add New**.
- c) Enter the address of the relevant Real Server.
- d) Complete the other fields as required.
- e) Click **Add this Real Server** then click **OK** to the pop-up message.
- f) Repeat the steps above to add more Real Servers as needed, based on your environment.

### 3.2.5 Create a SunGard eSchool PowerTeacher Virtual Service

The following are the steps involved and the recommended settings to configure the SunGard eSchool PowerTeacher Virtual Service:

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

Please Specify the Parameters for the Virtual Service.

---

Virtual Address

Port

Service Name (Optional)

Use Template  ▼

Protocol  ▼

---

2. Type a valid **Virtual Address**.
3. Type **5443** as the **Port**.
4. Enter a recognizable **Service Name**, such as **SunGard eSchool PowerTeacher**.
5. Select **tcp** as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Configure the settings as shown in the following table:

Section	Option	Value
Standard Options	Transparency	Enabled
	Persistence Mode	Source IP Address
	Timeout	6 Hours
	Scheduling Method	least connection
SSL Properties	SSL Acceleration	Enabled
	Cipher Set	BestPractices
Real Servers	Checked Port	80

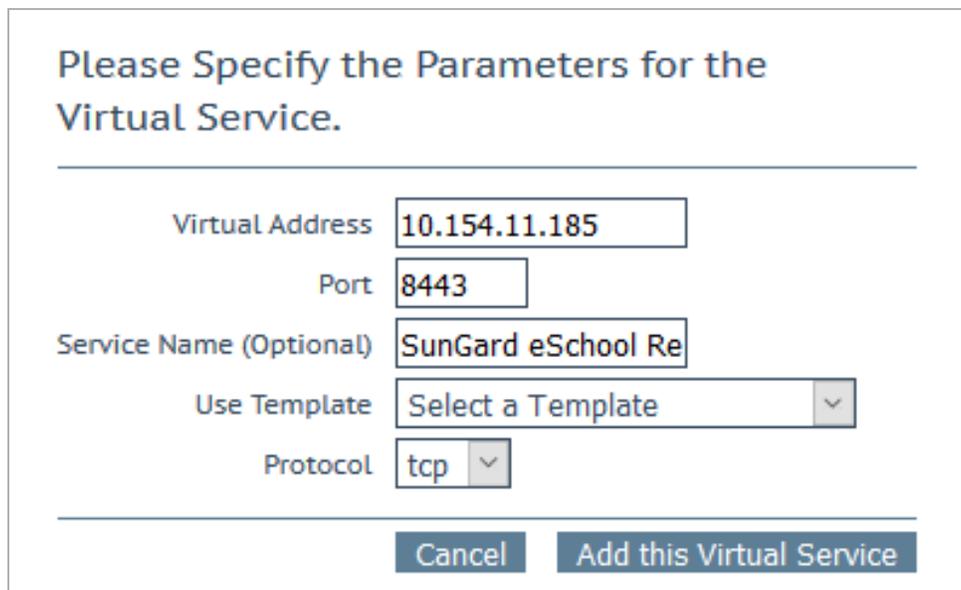
8. Add the Real Servers:

- a) Expand the **Real Servers** section.
- b) Click **Add New**.
- c) Enter the address of the relevant Real Server.
- d) Complete the other fields as required.
- e) Click **Add this Real Server** then click **OK** to the pop-up message.
- f) Repeat the steps above to add more Real Servers as needed, based on your environment.

### 3.2.6 Create a SunGard eSchool Report Virtual Service

The following are the steps involved and the recommended settings to configure the SunGard eSchool Report Virtual Service:

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



**Please Specify the Parameters for the Virtual Service.**

Virtual Address	<input type="text" value="10.154.11.185"/>
Port	<input type="text" value="8443"/>
Service Name (Optional)	<input type="text" value="SunGard eSchool Re"/>
Use Template	<input type="text" value="Select a Template"/>
Protocol	<input type="text" value="tcp"/>

2. Type a valid **Virtual Address**.
3. Type **8443** as the **Port**.
4. Enter a recognizable **Service Name**, such as **SunGard eSchool Report**.
5. Select **tcp** as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Configure the settings as shown in the following table:

Section	Option	Value	Comments
<b>Basic Properties</b>	Service Type	HTTP/HTTPS	
<b>Standard Options</b>	Transparency	Enabled	
	Persistence Mode	Active Cookie	You must enable SSL Acceleration before you can select Active Cookie.
	Timeout	6 Hours	
	Cookie name	PowerSchool_SSL	
	Scheduling Method	least connection	
<b>SSL Properties</b>	SSL Acceleration	Enabled	
	Cipher Set	BestPractices	
<b>Real Servers</b>	Checked Port	7980	

8. Add the Real Servers:

- a) Expand the **Real Servers** section.
- b) Click **Add New**.
- c) Enter the address of the relevant Real Server.
- d) Complete the other fields as required.
- e) Click **Add this Real Server** then click **OK** to the pop-up message.
- f) Repeat the steps above to add more Real Servers as needed, based on your environment.

### 3.2.7 Create a SunGard eSchool Scheduler Virtual Service

The following are the steps involved and the recommended settings to configure the SunGard eSchool Scheduler Virtual Service:

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

**Please Specify the Parameters for the Virtual Service.**

---

Virtual Address

Port

Service Name (Optional)

Use Template  ▼

Protocol  ▼

---

2. Type a valid **Virtual Address**.
3. Type **2000** as the **Port**.
4. Enter a recognizable **Service Name**, such as **SunGard eSchool Scheduler**.
5. Select **tcp** as the **Protocol**.
6. Click **Add this Virtual Service**.
7. Configure the settings as shown in the following table:

Section	Option	Value
<b>Standard Options</b>	Force L4	Enabled
	Persistence Mode	Source IP Address
	Timeout	8 Hours
	Scheduling Method	least connection

8. Add the Real Servers:
  - a) Expand the **Real Servers** section.
  - b) Click **Add New**.
  - c) Enter the address of the relevant Real Server.

- d) Complete the other fields as required.
- e) Click **Add this Real Server** then click **OK** to the pop-up message.
- f) Repeat the steps above to add more Real Servers as needed, based on your environment.

## Last Updated Date

This document was last updated on 13 October 2017.