Microsoft® Lync™ Server 2010

Survivable Branch Appliance

Mediant™ 800

Configuration Note

Mediant 800 SBA Software Upgrade and Recovery
in the Microsoft® Lync™ Server 2010 Environment

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Notice

This document describes how to upgrade and recover (if required) the SBA application software running on Mediant 800, located at the remote branch office and deployed in the Microsoft® Lync™ Server 2010 environment.

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Related Documentation

Manual Name
Mediant 800 SBA Quick Guide
Mediant 800 SBA for Lync 2010 Installation Manual
AudioCodes SCOM MP User Guide
Mediant 800 Enhanced Gateway and Analog Devices for Microsoft Lync Installation Manual
Mediant 800 & SIP Trunk Configuration Note
SIP Trunking Configuration Notes

1   Introduction

This document provides step-by-step instructions on how to upgrade the Survivable Branch Appliance (SBA) software application and how to recover it (in case of failure).

The SBA is hosted on the Mediant 800 OSN server platform, which is deployed at the remote branch office in the Microsoft Lync Server 2010 environment. Upon a WAN outage, the Mediant 800 SBA maintains call continuity among Microsoft Lync clients and devices within the branch office, and provides PSTN termination (if implemented) for these clients.

The SBA Upgrade and Recovery procedure is done using AudioCodes **SBA Upgrade and Recovery USB** tool (hereafter, referred to as the *USB tool*) which contains a later version of the SBA image file. The USB tool also provides a text-based file (*RecoveryUtil.ini*) that allows you to customize the upgrade and recovery process.

The SBA Upgrade and Recovery procedural steps can be summarized as follows:

Figure 1-1: Summary of Steps for SBA Upgrade and Recovery
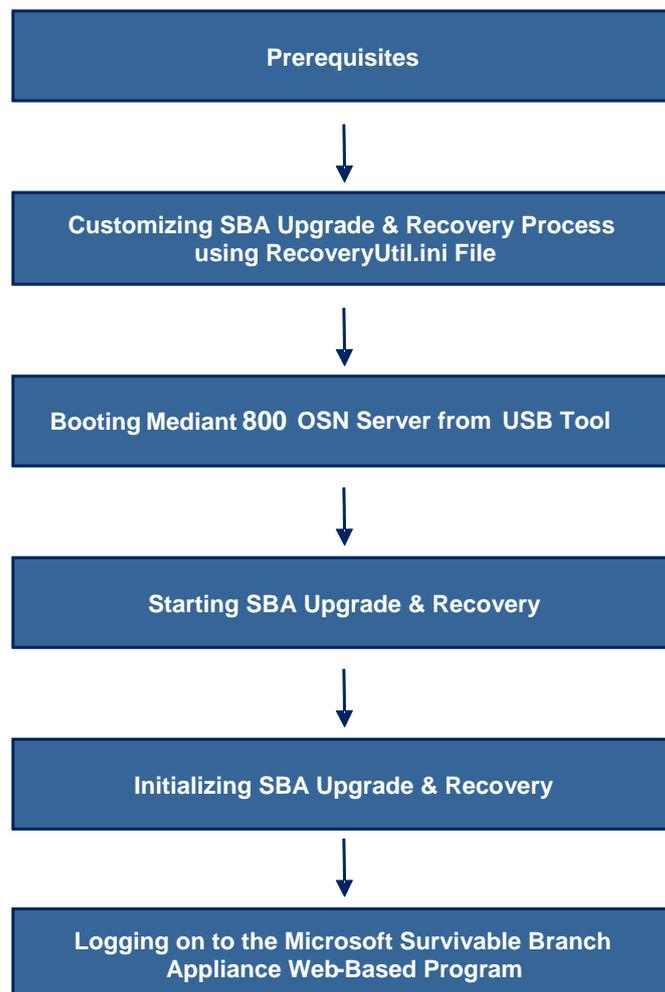
Reader's Notes

2   Prerequisites

Before you can begin the SBA upgrade and recovery, do the following:

■ Ensure that you have received the USB tool in your SBA kit (from AudioCodes).

■ Set the location of the SBA image file that you want to burn to the OSN server to one of the following:

- SBA Upgrade and Recovery USB tool

- FTP server

- Local network

- Recovery Partition (drive **D:**) on the OSN hard disk

■ If you have recently obtained a later SBA image file version, it is recommended to copy it to the USB tool (prior to performing the SBA upgrade and recovery), and then delete the old image from the USB tool (the old image resides in the root folder with the file extension, *.wim*)

Notes:

- The USB tool is supplied with an image of the SBA upgrade and recovery.

- When using the recovery partition of the OSN server as the location for the SBA image file, you must disable the partitions and formatting operations, using the *RecoveryUtil.ini* file (see Section 3.3 on page 14).

- You can also download the SBA image file from AudioCodes Web site at http://www.audiocodes.com/sba or obtain a DVD from AudioCodes with the new version.

Reader's Notes

3   Customizing the SBA Upgrade and Recovery Process

The *RecoveryUtil.ini* file is a text-based file that is located in the root directory on the supplied USB tool. This file contains parameters for defining various options relating to the SBA upgrade and recovery process. The *RecoveryUtil.ini* file is supplied with recommended configuration settings. However, you can modify them to suit your requirements.

> **Warning:**
>
> Before plugging the USB tool into the PC, ensure that the PC boot priority from USB is disabled or it's set to the last priority. This setting is crucial. If your PC is set to boot from USB before it attempts to boot from the hard drive, then if your PC restarts while the USB tool is plugged in, your PC boots from the USB tool, thereby reformatting your PC and damaging your PC operating system.

The procedure below describes how to modify the *RecoveryUtil.ini* file.

➢ **To modify the *RecoveryUtil.ini* file:**

1. Plug the USB tool into a USB port on the PC.
2. Open (using a text-based editor such as Notepad) the *RecoveryUtil.ini* file located on the USB tool.
3. Perform the required modifications, as described in the subsequent subsections.
4. Save and close the file.
5. Remove the USB tool from the PC.

3.1   Defining Manual or Automatic Start

You can configure the SBA upgrade and recovery to start manually or automatically, by using the *RecoveryStartType* parameter:

■ **Manually (recommended and default):** To start the SBA upgrade and recovery manually, set the *RecoveryStartType* parameter to **1**, as shown below:

```
 [Execution] RecoveryStartType= 1
```

When this setting is used, you need to run the upgrade and recovery utility script manually from the DOS shell command line (using a VGA with "gorecover" command)).

■ **Automatic:** To start the SBA upgrade and recovery automatically, set the *RecoveryStartType* parameter to **0**, as shown below:

```
 [Execution] RecoveryStartType= 0
```

When this setting is used, the SBA upgrade and recovery process runs automatically using *Windows Pre-installation Environment* (WinPE). In addition, it is recommended to set the parameter *OnExit* to **2** (see Section 3.5 on page 15) so that the Mediant 800 OSN server shuts down when the procedure completes. This process can be monitored using the VGA (see Section 4.1 on page 24).

3.2   Checking Disk before Image Burn

You can configure the SBA upgrade and recovery to check the disk before burning the SBA image to the ON3 server, using the *CheckDisk* parameter. The result of this disk check is logged to the *RecoveryLog.txt* file, located on the USB tool.

■   **Enable disk check (recommended and default):** To enable disk checking before burning the image, set the *CheckDisk* parameter to **0**, as shown below:

```
[Execution] CheckDisk=0
```

■   **Disable disk check:** To disable disk checking before burning the image, set the *CheckDisk* parameter to **1**, as shown below:

```
[Execution] CheckDisk=1
```

3.3 Creating Disk Partitions

You can configure the SBA upgrade and recovery to create disk partitions on the OSN server, using the *DiskPartitions* parameter.

■ **To enable disk partitions (recommended and default):** set the *DiskPartitions* parameter to 1, as shown below:

```
[Execution] DiskPartitions=1
```

Notes:

- The SBA is shipped with an image on the recovery partition (**D:** drive on the OSN hard disk). If the parameter *DiskPartitions* is set to 1, then this image is deleted. Therefore, before partitioning, it is recommended to backup the file to an external storage media.
- If the parameter *DiskPartitions* is set to **1**, then the image location can't be the recovery partition.

With this setting, you must also set the following:

- **Partition Size:** Set the main partition size in Megabytes:

```
[DiskPartitions] MainPartitionSize=100000
```

Notes:

- The recommended main partition size is 100000 (i.e., 100 Gigabytes).
- Ensure that the secondary partition is at least 10 GB, as it is used to hold SBA image file, which is downloaded through FTP.

- **Format Partitions:** Format disk partitions into main (**C:**) and secondary (**D:**) partitions, by setting the *FormatPartitions* parameter to **1**, as shown below. (If set to **0**, disk partitions are not formatted).

```
[DiskPartitions] FormatPartitions=1
```

■ **To disable creation of disk partitions:** set the *DiskPartitions* parameter to **0**, as shown below:

```
[Execution] DiskPartitions=0
```

3.4   Enabling SBA Image Burn on Primary Partition

You can configure the SBA upgrade and recovery to burn the SBA image on the main partition, using the *RecoverImage* parameter.

- **To enable image burn on primary partitions (recommended and default):** Set the *RecoverImange* parameter to **1**, as shown below:

```
[Execution] RecoverImange =1
```

- **To disable image burn on primary partitions:** Set the *RecoverImange* parameter to **0**, as shown below:

```
[Execution] RecoverImange =0
```

3.5   Defining Exit Operation upon Process Completion

You can configure the SBA upgrade and recovery to perform a specific operation upon the completion of the process, using the *OnExit* parameter.

- **Start command prompt:** Set the *OnExit* parameter to **0** to start the command prompt upon process completion:

```
[Execution] OnExit = 0
```

- **Reboot OSN server:** Set the *OnExit* parameter to **1** to reboot the OSN server upon process completion:

```
[Execution] OnExit = 1
```

- **Shut down OSN server:** Set the *OnExit* parameter to **2** to shut down the OSN server upon process completion:

```
[Execution] OnExit = 2
```

3.6 Defining Network Parameters

You can configure the network parameters for the SBA upgrade and recovery process, using the parameters under the *[NetworkCardConfiguration]* section in the *RecoveryUtil.ini* file.

> **Note:** These network settings are used **only** for communication between the OSN and an FTP server or a local network for downloading the image file, as described in Section 3.80 on page 17. The IP address of the OSN LAN port is assigned only after initialization (by a DHCP server), as described in Section 5 on page 27.

■ **Use DHCP for obtaining IP address (recommended and default):** Set the *EnableDhcp* to **1**, as shown below:

```
[NetworkCardConfiguration] EnableDhcp=1
```

This is only applicable if you have a DHCP server in your network.

■ **Manually (Static) define IP address:** Set the *EnableDhcp* to **0**, as shown below:

```
[NetworkCardConfiguration] EnableDhcp=0
```

When set for static IP address, configure the static network address, as shown below:

- **IpAddress:** Defines the static IP address:

```
[NetworkCardConfiguration] IpAddress=10.21.22.55
```

- **SubnetMask:** Defines the subnet:

```
[NetworkCardConfiguration] SubnetMask=255.255.0.0
```

- **DefaultGateway:** Defines the default gateway:

```
[NetworkCardConfiguration] DefaultGateway=10.21.0.1
```

- **DnsServers:** Defines the domain name server (DNS):

```
[NetworkCardConfiguration] DnsServers=10.1.1.11
```

3.7   Defining the SBA Image File Name

You can configure the SBA image file name for the SBA upgrade and recovery, using the *Filename* parameter.

```
[WIM Filename] Filename
```

> **Note:** By default, the name of the image file is *imageM1k.wim.* For the Mediant 800, you must change the filename to *imageM800.win*

3.8   Defining the SBA Image File Source

You can configure the source (location) from where the image file can be obtained for the SBA upgrade and recovery process, using the *Source* parameter:

- **FTP:** Set *Source* to **1**, as shown below:

```
[ImageSource] Source = 1
```

If the image file is located on an FTP server, then see Section 3.8.1 on page 19 to define the FTP server address and login credentials.

- **Local network:** Set *Source* to **2**, as shown below:

```
[ImageSource] Source = 2
```

If the image file is located on the local network, then see Section 3.8.2 on page 19 to define the network path (URI) to where the file is located and the logon username and password.

- **SBA Recovery USB tool (recommended and default):** Set *Source* to **3**, as shown below:

```
[ImageSource] Source = 3
```

If the image file is located on the USB tool, then see Section 3.8.3 on page 20 to define the directory path to where the image file is located.

- **Recovery partition:** Set *Source* to **4**, as shown below:

```
[ImageSource] Source = 4
```

If the image file is located on the recovery partition, then see Section 3.8.4 on page 20 to define the directory path to where the file is located.

> **Note:** For sources 1, 2, and 3, the image is also copied to the recovery (second) partition for future use.

3.8.1   Defining the FTP

If the image file is located on an FTP server (i.e., *[ImageSource] Source = 1,* as defined in Section 3.80 on page 17), then you need to define the FTP server address and login credentials:

■   **[FtpSettings] Site:** Defines the IP address or FQDN of the FTP server (FTP server can be in the local network or on the Internet):

```
[FtpSettings] Site=10.13.4.115
```

■   **[FtpSettings] User:** Defines the FTP login user name:

```
[FtpSettings] User=Admin
```

■   **[FtpSettings] Password:** Defines the FTP login password:

```
[FtpSettings] Password=1234
```

> **Note:**   The image file must be located on the root of the FTP server.

3.8.2   Defining the Local Network

If the image file is located on a local network (i.e., *[ImageSource] Source = 2*, as defined in Section 3.80 on page 17), then you need to define the network path (URI) to where the file is located and the access username and password.

■   **[LocalNetworkSettings] Path:** Defines the network URI:

```
[LocalNetworkSettings] Path=\\192.168.1.4\images
```

■   **[LocalNetworkSettings] User:** Defines the login user name:

```
[LocalNetworkSettings] User=audiocodes\john.smith
```

■   **[LocalNetworkSettings] Password:** Defines the password:

```
[LocalNetworkSettings] Password=1234
```

3.8.3 Defining the Disk On Key

If the SBA image file is located on the USB tool (i.e., *[ImageSource] Source = 3*, as defined in Section 3.8 on page 17), then you must define the directory path to where the image file is located. This is defined using the *[DOKsettings] DirectoryPath* parameter.

The path must be set without the volume (for example, "\recovery\"). The application searches for this directory in all drives. For the USB root directory, set this parameter to "\" (**default and recommended**), as shown below:

```
[DOKsettings] DirectoryPath=\
```

3.8.4 Defining the Recovery Partition

If the SBA image file is located on the recovery partition (i.e., *[ImageSource] Source = 4*), then you need to define the directory path to where the file is located. This is defined using the *[RecoveryPartition] DirectoryPath* parameter.

The path must be defined without the volume (for example, "\recovery\"). The application searches all the drives for this directory. For recovery partition root, set this parameter to "\" (**recommended and default**):

```
[RecoveryPartition] DirectoryPath=\
```

3.9 Defining VNC Server

This option enables a VNC server for providing remote access to the logged messages.

```
[RemoteDesktopServer] Enable=0      ; VNC is disabled.
[RemoteDesktopServer] Enable=1      ; VNC is enabled.
```

3.10   Defining the MAC Address Prefix

You can configure the MAC address (prefix or full address) of the Mediant 800 for which the SBA upgrade and recovery process can run, using the *MacPrefix* parameter. This prevents accidental running of the SBA upgrade and recovery on your PC. If not configured, the procedure runs on any system.

```
[User Confirm] MacPrefix=00-45-B1-22-49-B1
```

You can define several MAC addresses by suffixing the *MacPrefix* parameter with an index number for each MAC address, as shown in the example below:

```
[User Confirm]
MacPrefix=01034E
MacPrefix1=0
MacPrefix7=01-03-5C
MacPrefix3=01-03
```

The default MAC addresses set in the file include the following:

- MacPrefix=00-80-82
- MacPrefix1=00-40-9E
- MacPrefix2=00-0B-AB
- MacPrefix3=00-90-8F (For the Mediant 800 ensure that this prefix exists)

Reader's Notes

4   Starting the SBA Upgrade and Recovery

After you have customized the SBA upgrade and recovery process, using the *RecoveryUtil.ini* file (see Section 3), you can start the process. The process can be done with or without online monitoring.

	Notes:
⚠️	• Ensure that the boot priority set in the BIOS of the OSN server is to boot first from the USB (i.e., from the USB tool), and not from the OSN server's hard drive.
	• When the process completes, you can view the results of the SBA upgrade and recovery process in the log file, *RecoveryLog.txt* located on the USB tool.

4.1 Starting Process with Online Monitoring using VGA

You can monitor the SBA upgrade and recovery process using the VGA monitor.

➢ **To monitor SBA upgrade and recovery using VGA:**

1. Open (using a text editor such as Notepad) the *RecoveryUtil.ini* file and then do the following:
   - Set the 'RecoveryStartType' parameter to **0**, in order to start the process automatically when Windows PE starts.
   - Set the 'OnExit' parameter to **2** so that the OSN server shuts down upon SBA upgrade and recovery completion.

```
[Execution] RecoveryStartType= 0
[Execution] OnExit = 2
```

2. Save and close the *RecoveryUtil.ini* file.
3. Plug the USB tool into the USB port on the OSN server (on the Mediant 800 rear panel), as shown in the figure below.
4. Plug the mouse and the keyboard to separate USB ports and the VGA monitor to the VGA port on the OSN server (on the Mediant 800 rear panel), as shown in the figure below.

Figure 4-1: Plugging OSN Server Accessories
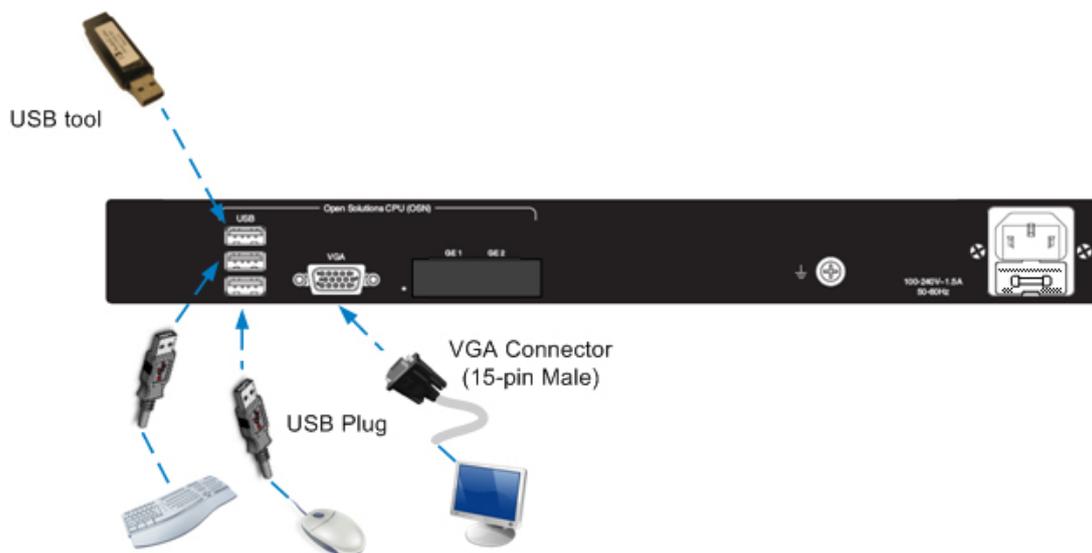
5. Power off and then power on the Mediant 800 to reboot the OSN server; the SBA Upgrade and Recovery process starts and logged messages are displayed on the VGA monitor.

When the process completes, the following logged messages are displayed on the VGA monitor:

Figure 4-2: Online Monitoring Using VGA

6. Continue with procedure 'Initializing the Upgraded SBA' Section 5 on page 27 .

Reader's Notes

5   Initializing the Upgraded SBA

Once the SBA image file has burnt successfully on the OSN server, you need to initialize the new SBA image, as described in this section.

> **Note:**   The procedures described in this section must be done only if the burning process completed successfully.

The initialization process is performed in the following two steps:

1. Rebooting the OSN server – see Section 5.1 on page 27.
2. Logging on to the Web-based SBA wizard graphical user interface (GUI) – see Section 5.2 on page 28.

5.1   Rebooting the OSN Server

The procedure below describes the first step for initializing the upgraded SBA application.

➢ **To initialize the upgraded SBA:**

1. Remove the USB tool from the USB port on the OSN server.
2. Power off and then power on Mediant 800 to reboot the OSN server; the initialization process starts.

> **Notes:**
>
> - This step may take a while (about 10 minutes). While Mediant 800 is rebooting, **DO NOT** power off Mediant 800.
> - During initialization, the OSN server restarts **twice**, and boots up from *sysprep* and performs Windows Activation automatically .You can monitor the process via the VGA (see Section 4.1 on page 24).
> - At the end of the process, all Network Interface Cards (NIC) of the OSN server are assigned IP addresses by the DHCP server .

5.2 Logging on to the SBA Wizard

Once you have enabled the NIC used for the external LAN port of the OSN, disabled the others, and noted the new IP address of the external LAN port, you can connect to the SBA wizard for configuring the SBA.

➢ **To log on to the SBA wizard:**

1. Connect the LAN port of the OSN server to the network.

2. Open a standard Web browser (Firefox, Google Chrome, or Internet Explorer 8 and later is recommended), and then in the URL address field, enter the new IP address that you assigned to the LAN port of the OSN server: http://<OSN server IP address>.

Figure 5-1: Survivable Branch Appliance Login Screen
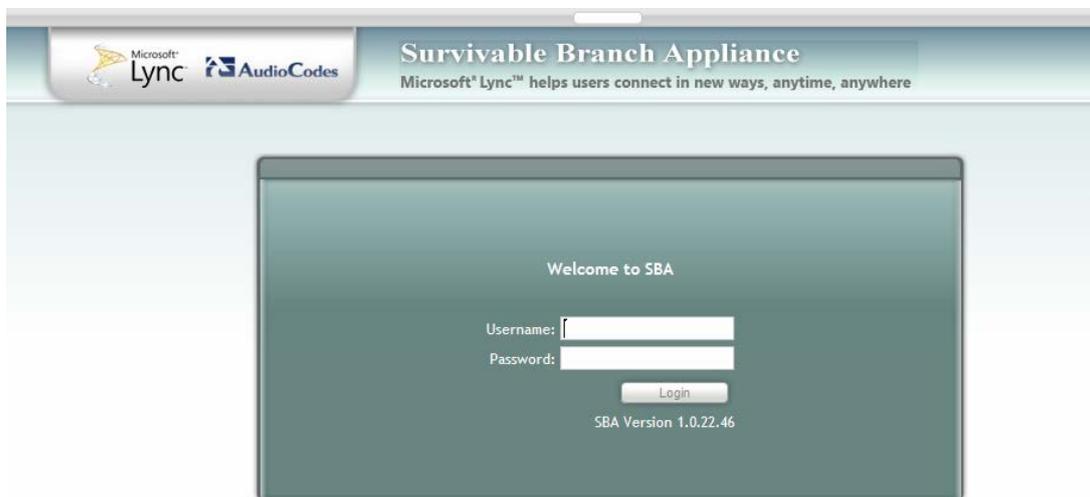
3. Refer to Mediant 800 SBA for Lync 2010 Installation Manual document for configuring SBA.

Reader's Notes

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Configuration Note