

BrightSign®

UPGRADE GUIDE

BrightSign Network Enterprise Edition 4.0

TABLE OF CONTENTS

Introduction.....	1
What's New in BSNEE 4.0?	1
Minimum Hardware Requirements.....	1
Recommended Hardware Requirements.....	1
Minimum Software Requirements	2
Recommended Software Requirements	2
BrightSign Software Requirements	3
Pre-Installation	4
Installation	5
Prerequisites	5
Customized Files.....	6
Database Server	7
Backup Database	7
Bindings Configuration	8
Website and Services Destination Locations	9
Post-Installation.....	11
Configuring BrightAuthor	11

Configuring MIME Types in IIS 11



INTRODUCTION

This manual will guide you through the process of upgrading your BSNEE services to version 4.0. Note that you can only use the 4.0 Upgrade Installer to upgrade from BSNEE version 3.9. BSNEE 3.9 installations that were upgraded using a previous version of the Upgrade Installer are also supported.

The BSNEE upgrade installer can only upgrade standard BSNEE installs with standard database schema. However, BSNEE installs with customized WebUI files are supported.

What's New in BSNEE 4.0?

The following features and improvements have been implemented since the previous version of BSNEE (3.9):

- **BrightWall™ Support:** You can now upload BrightWall presentations to BSNEE servers, create BrightWall instances using networked players, add BrightWall instances to BrightWall groups, and schedule BrightWall presentations for BrightWall groups. These operations can currently only be carried out using BrightAuthor.
- **Remote Snapshot Support:** You can now set up players to take snapshots of the presentation area and upload them to the BSNEE servers in real time. These snapshots can be then be viewed in the **Manage > Status** tab in BrightAuthor.

Minimum Hardware Requirements

- 1.4 GHz or faster Dual Core processor
- 2GB of RAM
- 6GB free hard disk space
- Network connection

Note:

- A minimum hardware configuration should be used for testing/evaluation purposes only.
- Device logs should be disabled with a minimum hardware configuration.
- A maximum of 50 networked devices is recommended with this configuration.

Recommended Hardware Requirements

- 2.2 GHz or faster Quad Core processor (Intel Xeon is preferred)

- 16GB of RAM
- 50GB free hard disk space for Temporary Storage
- 1TB additional free hard disk space for Persistent Storage (high-performance RAID configuration is preferred)
- 1 Gbps network connection

Note:

- This hardware configuration is recommended for production use.
- A maximum of 500 networked devices is recommended with this configuration. If you want to increase the maximum amount of networked devices, note the following:
 - A more powerful CPU is required for operations stemming from the SQL server, Device Handlers node, and the Scheduler service.
 - More RAM is required for intensive processing of device logs (when all log types are enabled for every device), the SQL server, and the Scheduler service.
 - More free hard disk space is required for Persistent Storage and device log reports. Intensive operations may also be bottlenecked by the speed of the HDD.

Minimum Software Requirements

- Windows Server 2008 R2 (x64, with IIS installed)
- MS SQL Server 2008 SP1, including Express edition
- .NET Framework 4.0 or later (4.5 recommended for full IE10/IE11 support)
- X.509 certificate issued for the BSNEE Web Services node with the following attributes:
 - The “CN” attribute represents the target host (for example, “*.mydomain.com” or “api.mydomain.com”). The installer uses this value to validate the bindings configuration.
 - The certificate is issued using the [Microsoft RSA/Schannel Cryptographic Provider](#) or the [Microsoft DDS and Diffie-Hellman/Schannel Cryptographic Provider](#).

Recommended Software Requirements

- Windows Server 2012 R2 (with IIS installed)
- MS SQL Server 2012 SP1 or later, including Express edition
- .NET Framework 4.5 or later
- X.509 certificate issued for the BSNEE Web Services node

Note: The X.509 certificate is required by WS-* (WS-Security) specifications for message-level encryption in WCF services, as well as transport-level encryption for compliance with the WS-I Basic Profile 1.1, which is used by the BSN API on the Web Services node.

BrightSign Software Requirements

- Target BrightAuthor version: **4.1.1.x**
- Minimum required BrightAuthor version: **3.5.0.34**
- Minimum player firmware version:

Device Family	Minimum Firmware
4K242, 4K1042, 4K1142	5.0.22
XD232, XD1032, XD1132	5.1.24
HD222, HD1022	5.1.16
LS322, LS422	5.1.16
XD230, XD1030, XD1230	4.4.44
HD220, HD1020, AU320	4.4.44
HD210w, HD1010(w), TD1012	3.10.22

PRE-INSTALLATION

Before running the BSNEE Upgrade Installer, you will need to register the following entry in the DNS (where "mydomain.com" is equal to your BSNEE Base Domain Name):

FQDN	Type	Value
webstorage.mydomain.com.	CNAME	mydomain.com.

INSTALLATION

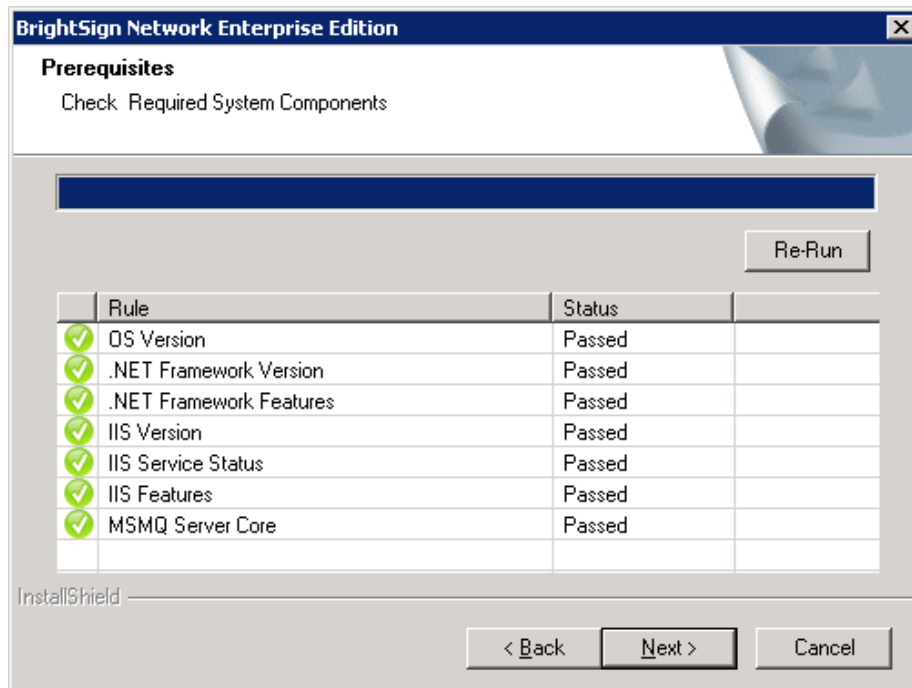
To start the upgrade process, click on the BSNEE Upgrade Installer software. The installer will extract the necessary files and prompt you to continue. Click **OK** to begin.

Prerequisites

The installer will check to ensure that you have all necessary system components to upgrade to BSNEE version 4.0.

The installer will check the following conditions:

- ✓ Operating System version (OS)
- ✓ .NET Framework version (4.0 or later)
- ✓ .NET Framework features
- ✓ WMI services activity status
- ✓ IIS version (7.0 or later)
- ✓ IIS services status
- ✓ IIS components set up status (40 items total)
- ✓ Microsoft Messages Queue set up status



Once the system check is finished, the installer will display a full list of components that are installed or that need to be installed. If an item does not pass the system check (as indicated by the *Failed* status), you can click the item to learn the reason for the failure and instructions for fixing the problem. After installing the missing component(s), click **Re-Run** to check the installation again.

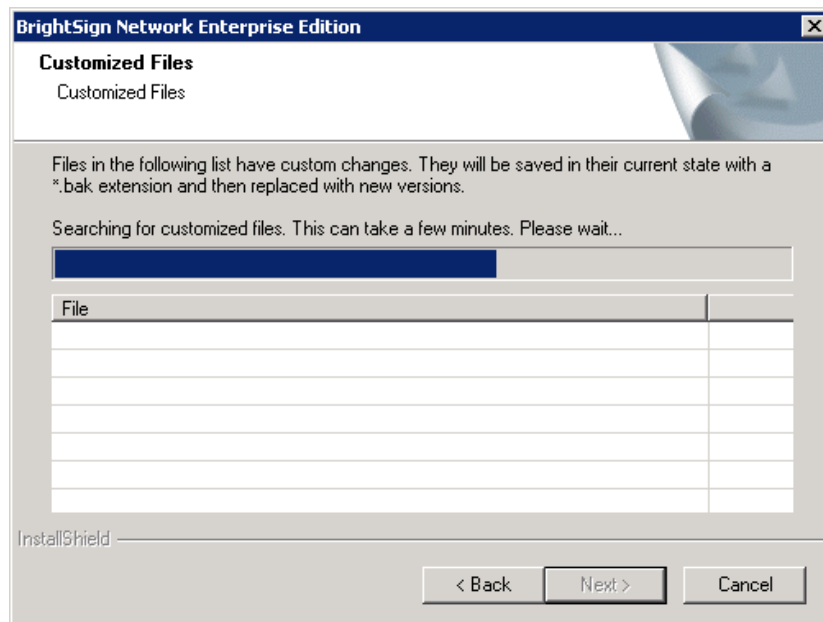
Once all components meet the requirements for installation, you will be able to click **Next** to continue.

Customized Files

The installer will search for any customized WebUI files within the BSNEE installation. Once the list of customized files is populated, click **Next**. The customized files will be saved with *.bak* extensions and replaced with standard versions during the final installation step.

If you have any customized files, you will need to manually re-implement them after the installation process is complete.

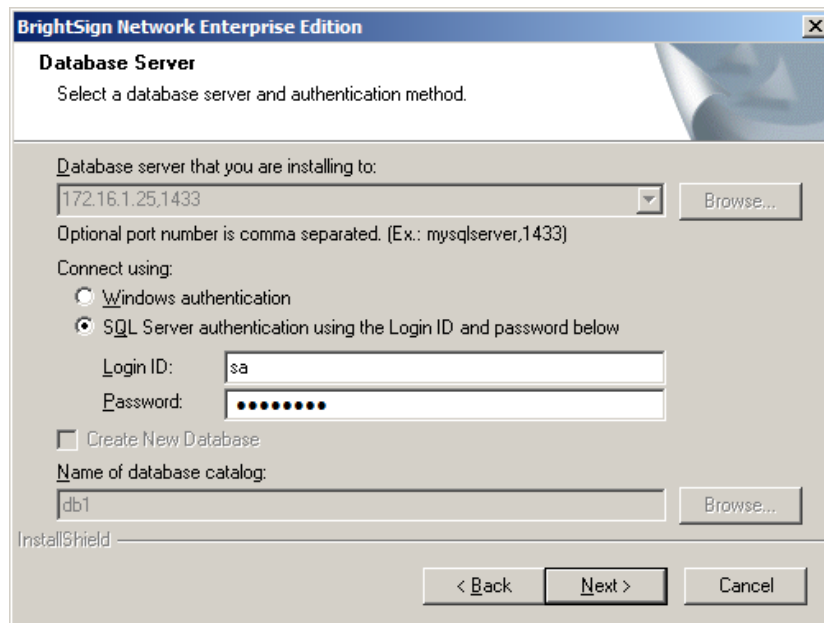
Note: *Customized database schemata are not supported by the upgrade installer. Clicking **Next** will return an error message if your BSNEE install contains customized database schema.*



Database Server

The **Database Server** step will only appear if you do not currently have access to the MS SQL Server where the BSNEE database is located. If this step does not appear after the **Customized Files** step, you can move on to the **Backup Database** step.

If you do not have authorization to modify the BSNEE database, you will need to enter valid **SQL Server** credentials.



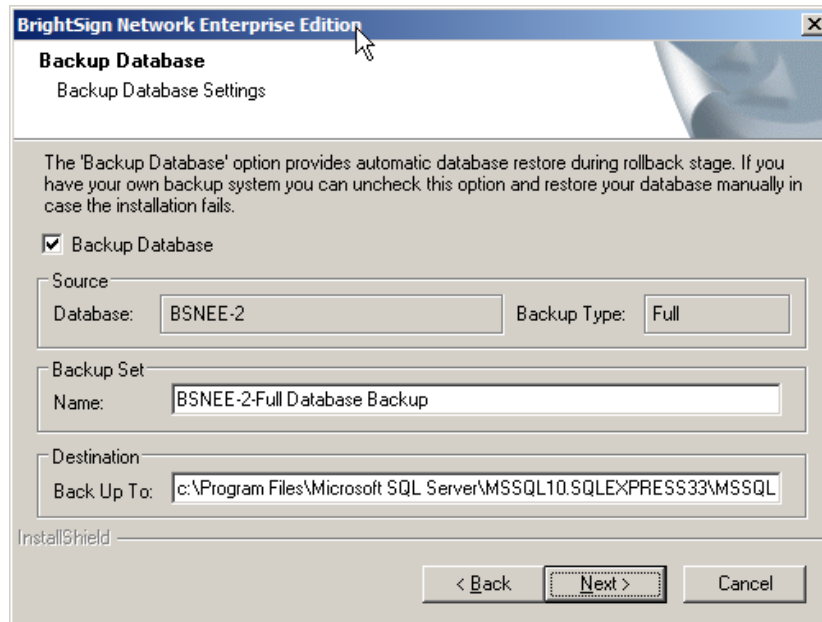
Backup Database

Check the **Backup Database** box to enable automatic rollback of the BSNEE database in case the upgrade process fails during installation. If the upgrade installation process is completed successfully, you will not be able to use this option to recover the previous BSNEE install. You should leave this box checked unless you have other means for backing up the database.

The **Backup Set** and **Destination** fields are automatically populated using information from the MS SQL server. You can modify them if necessary:

- **Backup Set:** Specify the **Name** of the backup file set.
- **Destination:** Specify the destination path of the backup file set on the MS SQL server. You can specify a path on a remote MS SQL server as well.

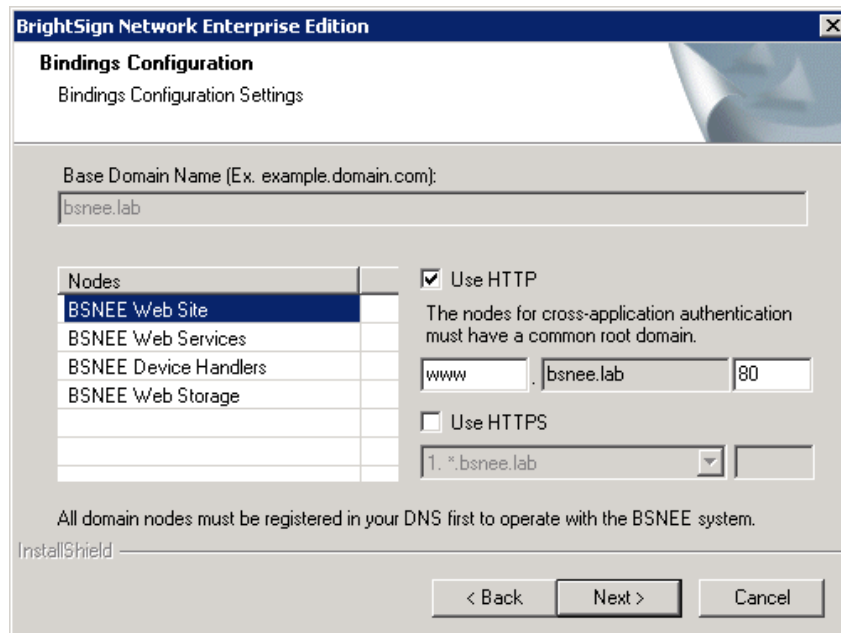
Click **Next** to confirm the backup parameters you have chosen.



Bindings Configuration

The Base Domain Name must remain the same during the BSNEE upgrade process. Select each node to change the bindings for that node.

Node names are populated using the existing BSNEE configuration files. The node names are editable, but we do not recommend changing them unless it is absolutely necessary. If the name of the **Device Handlers** node is changed, all players connecting to the BSNEE account will need to be set up again.



Check the **Use HTTP** and/or **Use HTTPS** boxes if you would like to enable these protocols for a node. You can also change the port numbers of each node.

BSNEE requires an X.509 certificate and HTTPS binding for the Web Services node. The X.509 certificate is required by the WS-* (WS-Security) specifications for message-level encryption in WCF services, as well as transport-level encryption for compliance with the WS-I Basic Profile 1.1. Please install a valid certificate and select it for the Web Services node.

Note: For testing purposes, you may use a self-signed certificate issued for the Web Services binding.

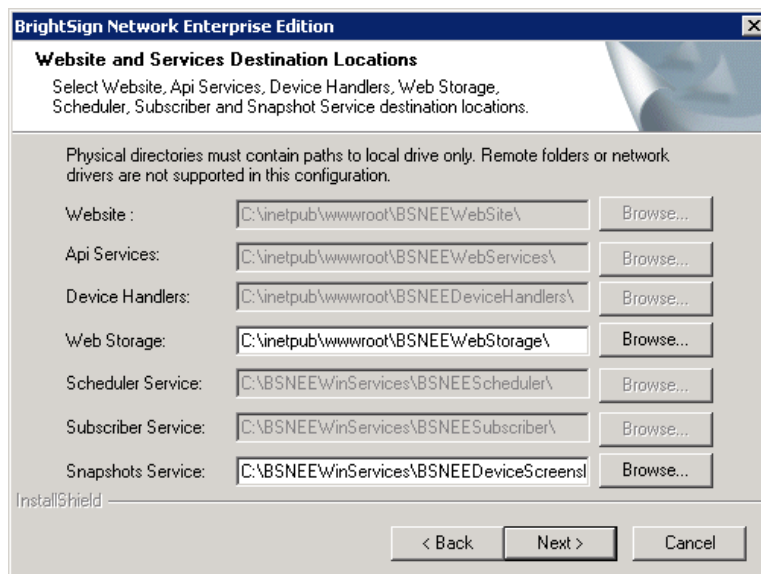
Note: Changing the HTTP port or adding HTTPS binding for the Device Handlers node will require devices to be set up again to use HTTPS. Also, devices will not work with self-signed certificates if these options are selected.

If you plan on using HTTPS, you should use the Microsoft Management Console (MMC) to ensure that you have appropriate permissions for the private key of the certificate. By default, read access is required for the “IIS_IUSRS” group (for more information, see **Pre-Installation > Persistent Root and Temporary Storage Folders** in the BSNEE Installation Guide).

Click the **Next** button when you have completed the bindings configuration.

Website and Services Destination Locations

Specify installation folders for the new **Web Storage** and **Snapshots Service** domains. Click the **Browse** button for each domain to select the desired folder.



Click the **Next** button to reach the confirmation page. Click **Install** to begin the upgrade process.

POST-INSTALLATION

Configuring BrightAuthor

BrightAuthor installations will need to be configured to connect to the BSNEE instance. BrightAuthor install files can be configured using the latest version BrightAuthor Configurator, which is available on the [Software Downloads](#) page.

If you were previously using BSNEE 3.3, and did not change any node names during the update process, follow these steps while running the Configurator:

1. Enter the **Base Domain Name** for the BSNEE instance.
2. Check the **Advanced Configuration** box.
3. For the **Application Services** node, use a “fileservices” domain instead of an “api” domain (e.g. “fileservices.mydomain.com”).
4. For the **Device Handlers** node, use a “services” domain instead of a “handlers” domain (e.g. “services.mydomain.com”).
5. For the **Storage** node, enter the same BSNEE Persistent Storage URL that was used previously.
6. Enter the **WS-* Endpoint DNS Identity (CN)**: This value must match the CN of the certificate that was assigned to the Web Services node.

Configuring MIME Types in IIS

BSNEE 4.0 includes support for additional file formats. If you’re using an IIS server as the Persistent Storage, you will need to register these MIME types with the server.

- For all Windows versions:
 - `.bvw` – text/plain
- If Windows Server 2008 R2 (IIS 7 or 7.5):
 - `.woff` – font/x-woff
 - `.svg` – image/svg+xml