

# BlueJeans Network

## Accelerator

Administration Guide

Document Release 5.10

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BlueJeans Network,  
516 Clyde Ave,  
Mountain View, CA 94043,  
USA  
+1 408-550-2828  
[www.bluejeans.com](http://www.bluejeans.com)

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*BlueJeans Accelerator Administration Guide.*

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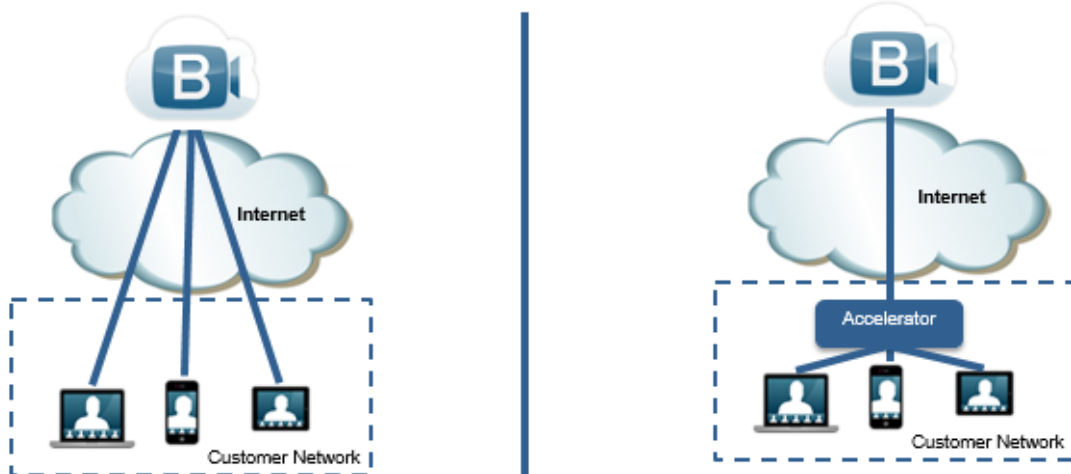
# 1 Introduction to Accelerator

- Introduction
- Technical Architecture
- Accelerator Security Aspects

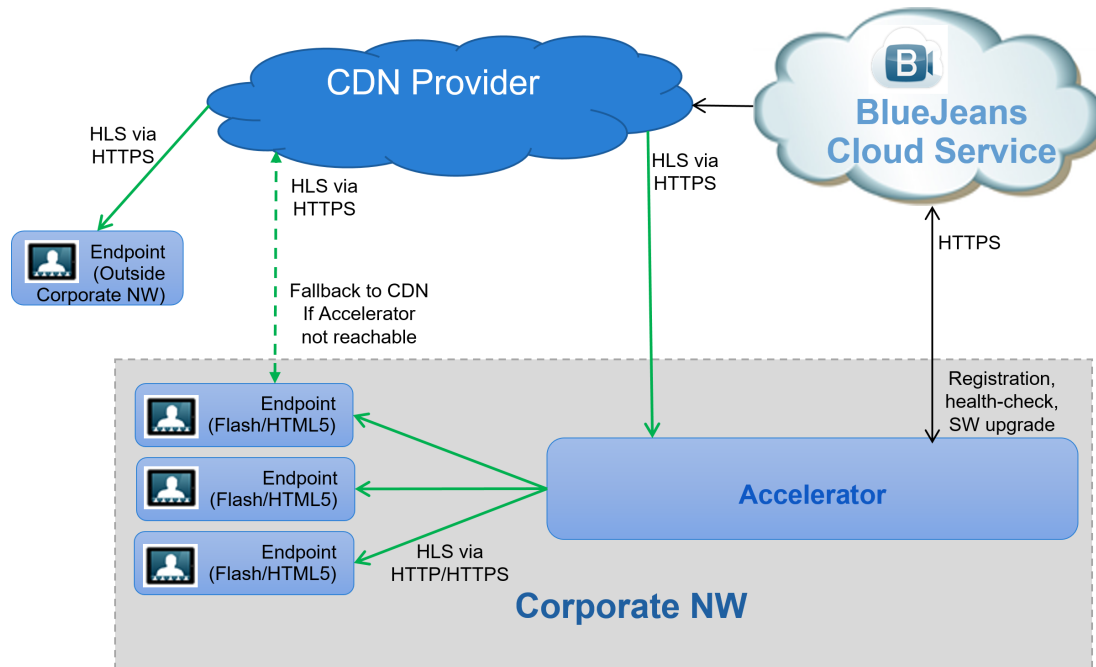
## 1.1 Introduction

---

BlueJeans Accelerator is a product deployed within an enterprise network which helps optimize the WAN bandwidth consumption when a Primetime event is streamed to a large number of attendees within an enterprise. This Accelerator fetches the Primetime media streams from the cloud, caches the media chunks and serves the clients locally.



## 1.2 Technical Architecture



### 1.2.1 Registration Process of Accelerator Node

On deployment of an Accelerator node in an enterprise, it tries to connect with the BlueJeans cloud to send registration message comprising of: Pairing code (for Authentication), Private IP Address (Internal IP Address of Accelerator configured by admin), Version no. etc.

BlueJeans Cloud Service maintains private IP & public IP mapping of all the registered Accelerator nodes. BlueJeans cloud service picks private IP address from registration message of Accelerator node and maps it with the public IP fetched from the Source IP address of the request.

This public & private IP mapping is maintained in a BlueJeans Database which is used to identify nodes deployed at specific enterprise office and can later be mapped with Attendees who are streaming from the same office.

### 1.2.2 Attendee's Join Flow

---

On entering attendee URL on the Browser, HTTPS request is sent to BlueJeans Cloud. Based on the attendee's URL, BlueJeans cloud checks for the enterprise and On-Prem enablement.

If On-Prem is enabled for that enterprise and deployed Accelerator is in "Online" state, then BlueJeans Cloud will reply with the URL comprising the Internal IP address of the Accelerator node.

Now attendee requests for the stream directly from the Accelerator node deployed within its enterprise using the Internal IP of Accelerator Node.

Once Accelerator gets the Attendee request, it starts fetching the stream of the event from the nearest CDN server and start caching it. All the attendees who are streaming the Event from the same Enterprise Office will fetch the stream from the Accelerator directly.

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## 1.3 Accelerator Security Aspects

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Accelerator uses "Pairing code authentication" at the time of installation of node. This is a secure & reliable way of authenticating any Accelerator node deployed at any Enterprise with BlueJeans Cloud. Pairing code is an alphanumeric key generated by BlueJeans and it can be used only once for registration and can't be used again, even for the same node.

Accelerator receives the Stream from CDN over https, therefore all the communication between Accelerator and CDN is secure. In case of Accelerator Nodes failure, Attendees fetch the stream from CDN over HTTPS.

---



**NOTE:** The Accelerator makes HTTPS requests to the BlueJeans cloud infrastructure over port 443. The enterprise admins should ensure that these ports are not blocked in the outbound direction. Therefore no inbound firewall ports need to be opened. Strongly recommend to deploy Accelerator Node in trusted/Inside Zone and not in DMZ or untrusted zone.

---

## 2 Accelerator VM Specifications & Prerequisite

- [Accelerator VM Specifications](#)
- [Accelerator Deployment Prerequisite](#)
- [Network & Firewall Configuration Recommendations](#)

### 2.1 Accelerator VM Specifications

---

The product is delivered as a Virtual Machine software.

Each VM is shipped with following pre-configured settings:

- 2 vCPUs
- 4GB Memory
- 20 GB HDD
- VMXNET 3 Network Adapter for OVF/OVA image



**NOTE:** Please retain these settings and assign a minimum of 1Gbps NIC to each Accelerator. Modifying these settings can impact Accelerator performance.

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### 2.2 Accelerator Deployment Prerequisites

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Accelerator deployment prerequisites are as follows:

1. Accelerator software is available as Virtual Machine image in the following formats:
  - OVF
  - OVA
  - HyperV

Please download the appropriate image

2. Software Requirement:
  - OVF/OVA deployment is qualified with VMware ESXi versions 5.5 & 5.10.
3. Hardware Requirement: Supporting any standard x86-64 server running at minimum 2.5 Gh
4. One IP Address on the local network (which Admin can assign to Accelerator)



5. One Pairing Code generated on the BlueJeans Enterprise Admin page (to register & authenticate Accelerator with BlueJeans Cloud)
6. 1 Gbps dedicated NIC for each Accelerator.

## 2.3 Network & firewall Configuration Recommendations

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1. The Accelerator is a device on the LAN. It should be accessible by local endpoints over the LAN. Strongly recommended to deploy Accelerator Node in trusted/Inside Zone and not in DMZ or untrusted zone.
2. In addition, it needs Internet connectivity to the BlueJeans cloud infrastructure.
3. The Accelerator makes HTTPS requests to the BlueJeans cloud infrastructure over port 443. The enterprise admins should ensure that these ports are not blocked in the outbound direction on Firewall.
4. In case all domains on port 443 are not allowed by default and only selected sites are allowed, then make sure the following domains are whitelisted:
  - bluejeans.com
  - a2m.bluejeans.com
  - tracker.bluejeans.com
  - primetime.bluejeans.com
  - streaming.bluejeans.com
  - streaming-akamai.bluejeans.com
  - ull-streaming-akamai.bluejeans.com
  - bjnsecure\_z-vh.akamaihd.net
  - accelerator-update.bluejeans.com
  - accelerator-coreos-updates.bluejeans.com
  - quay.io
  - cdn.quay.io
  - cdn01.quay.io
  - cdn02.quay.io
  - cdn03.quay.io
  - quay-registry.s3.amazonaws.com
  - \*.pubnub.com
  - \*.pndsn.com
  - \*.pubnub.net
  - \*.pubnub.io
  - \*.cloudfront.net
  - \*.sumologic.com
  - \*.flatcar.pool.ntp.org

## 3 Accelerator Setup Instructions

- Generate Pairing Code
- Deploy Accelerator Virtual Machine
- Configure Accelerator
- Check Deployed Node Status

### 3.1 Generate Pairing Code

The steps below will help you to generate Pairing Code which you can use to register & authenticate Accelerator with BlueJeans.

1. Login to your BlueJeans account by using your Enterprise Username & Password at URL: <https://bluejeans.com>
2. Once you access your account then navigate to Admin -> Manage Accelerator.
3. Click on “+Add Node” button.

The screenshot shows the BlueJeans Admin interface. The top navigation bar includes 'MEETINGS', 'EVENTS', 'ADMIN' (selected), 'COMMAND CENTER', 'RECORDINGS', and a menu icon. The left sidebar lists various settings: 'GROUP SETTINGS', 'MANAGE FEATURES', 'MANAGE USERS', 'MEETING HISTORY', 'EVENTS', 'RECORDING ACTIVITY', 'MANAGE ACCELERATOR' (highlighted), and 'RELEASE NOTES'. The main content area is titled 'Manage Accelerator' and features a toggle for 'Enable onprem for enterprise' (which is turned on) and an 'UPDATE' button. Below this is a table with columns: 'Name', 'Registered', 'Pairing Code', and 'Status'. The table contains five rows of data, all with 'Registered' status 'Yes' and 'Status' 'Online'. At the bottom right of the table, there is a red-bordered button labeled '+ Add Node'.

| Name           | Registered | Pairing Code | Status |
|----------------|------------|--------------|--------|
| BLR_10.5.9.164 | Yes        | paired       | Online |
| BLR_10.5.9.152 | Yes        | paired       | Online |
| BLR_10.5.9.92  | Yes        | paired       | Online |
| BLR_10.5.9.153 | Yes        | paired       | Online |
| BLR_10.5.9.90  | Yes        | paired       | Online |

4. Enter Name in the field. (Note: - This Name is for your reference to manage these nodes therefore give names which will help you to recognize these nodes. For e.g. you can mention Lab, IP, Location etc. here.)
5. Once Name is provided then click on “Save” Button.

BlueJeans

MEETINGS EVENTS ADMIN COMMAND CENTER RECORDINGS ...

GROUP SETTINGS

MANAGE FEATURES

MANAGE USERS

MEETING HISTORY

EVENTS

RECORDING ACTIVITY

MANAGE ACCELERATOR

RELEASE NOTES

Enable onprem for enterprise ☒

UPDATE

| Name           | Registered | Pairing Code | Status |
|----------------|------------|--------------|--------|
| BLR_10.5.9.164 | Yes        | paired       | Online |
| BLR_10.5.9.152 | Yes        | paired       | Online |
| BLR_10.5.9.92  | Yes        | paired       | Online |
| BLR_10.5.9.153 | Yes        | paired       | Online |
| BLR_10.5.9.90  | Yes        | paired       | Online |
| Test           |            |              |        |

SAVE

+ Add Node

6. Note down this Pairing Code. You will need this pairing code when you deploy the Accelerator VM in section [3.3](#).

BlueJeans

MEETINGS EVENTS ADMIN COMMAND CENTER RECORDINGS ...

GROUP SETTINGS

MANAGE FEATURES

MANAGE USERS

MEETING HISTORY

EVENTS

RECORDING ACTIVITY

MANAGE ACCELERATOR

RELEASE NOTES

Enable onprem for enterprise ☒

UPDATE

| Name           | Registered | Pairing Code | Status       |
|----------------|------------|--------------|--------------|
| Test           | No         | HyXiMsU      | Disconnected |
| BLR_10.5.9.164 | Yes        | paired       | Online       |
| BLR_10.5.9.152 | Yes        | paired       | Online       |
| BLR_10.5.9.92  | Yes        | paired       | Online       |
| BLR_10.5.9.153 | Yes        | paired       | Online       |
| BLR_10.5.9.90  | Yes        | paired       | Online       |

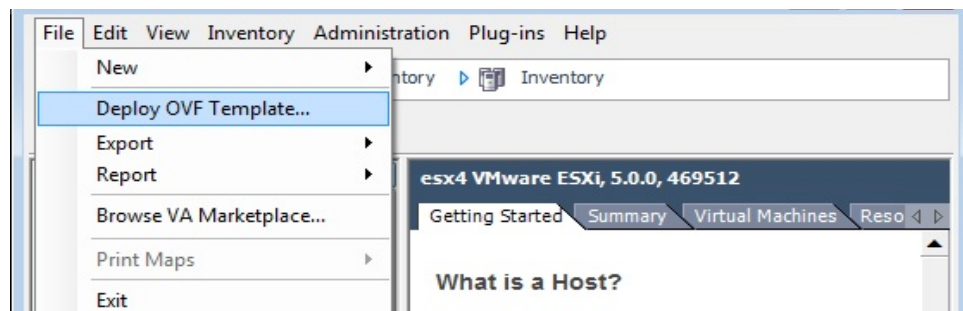
+ Add Node

## 3.2 Deploy Accelerator Virtual Machine

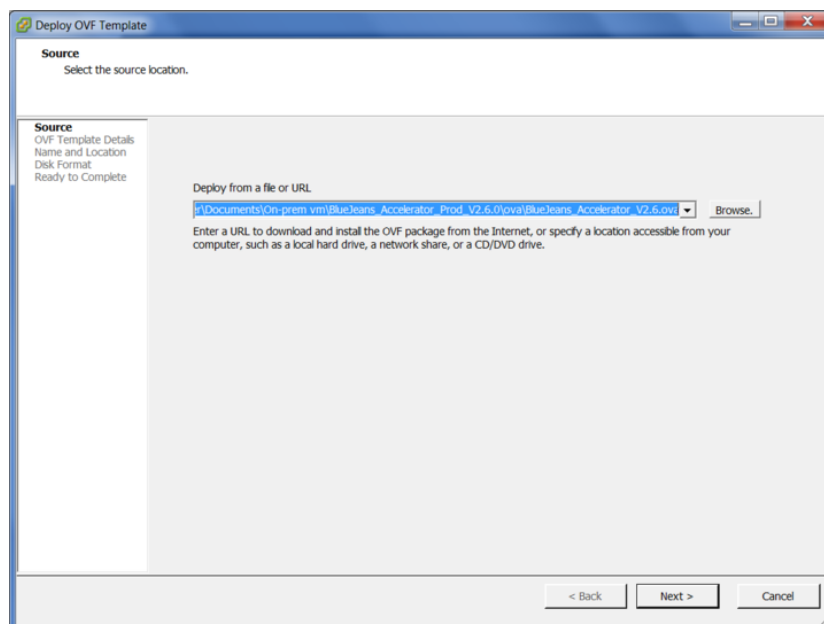
### 3.2.1 OVF/OVA deployment

This section will guide you on how to deploy Accelerator OVF/OVA image in enterprise Network

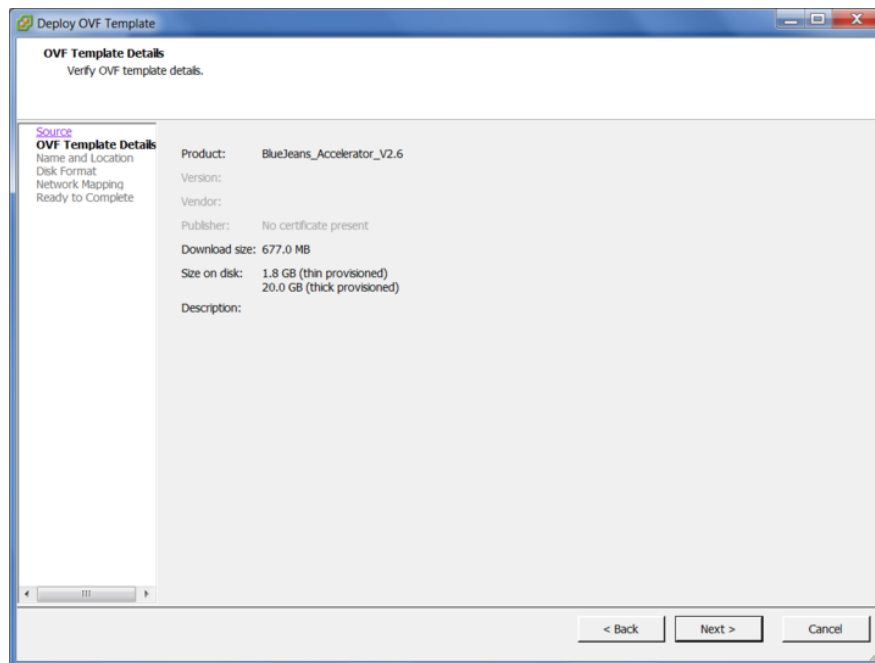
1. Download the On-Prem Accelerator VM Package “BlueJeans\_Accelerator\_V5.8” from BlueJeans shared site.
2. Open VSphere Client and here select File → Deploy OVF template.



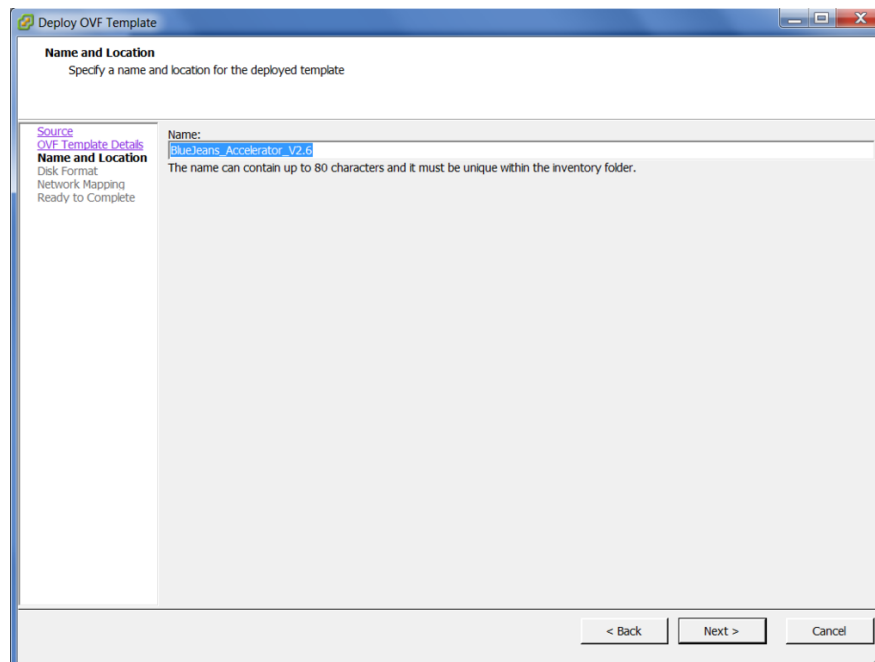
3. Then browse to the folder where you extracted the files and you should see a BlueJeans\_Accelerator\_V5.8.ovf file, select that and click “Next”.



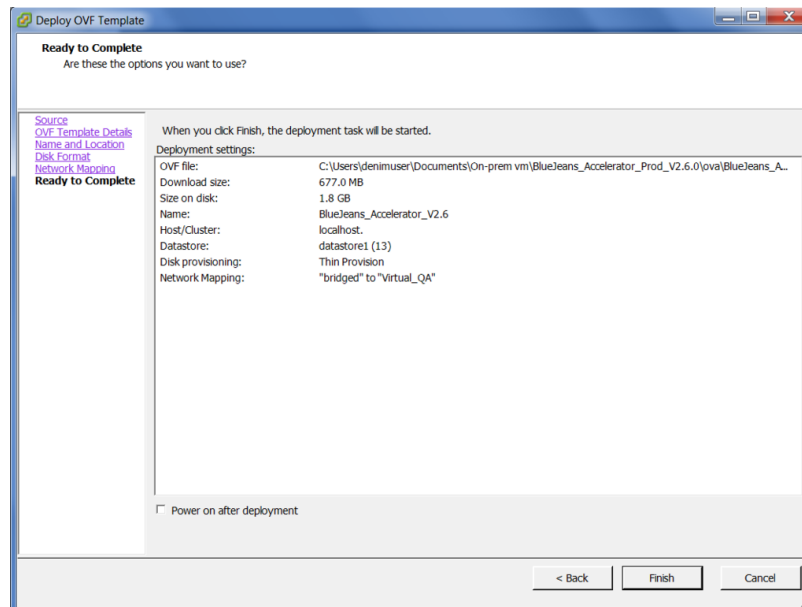
#### 4. Select Next for the “OVF Template Details”



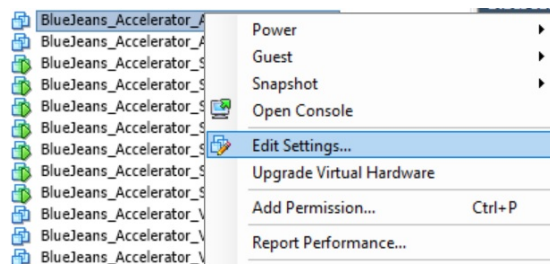
#### 5. Enter a descriptive name for this VM Node and select “Next”.



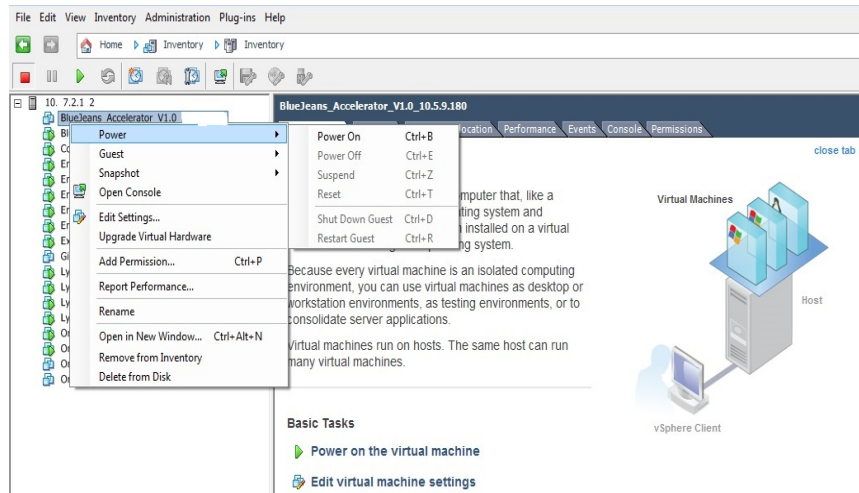
6. Choose Destination Storage by selecting appropriate datastore and select “Next”.
7. Select Disk Format “Thick Provision Lazy Zeroed” or “Thin Provision” based on disk space management and utilization as per your enterprise policy & practice and then select Next.
8. Then map the network used in this OVF template to network in your inventory by selecting drop down menu (if more networks are configured) under Destination Network and select Next.
9. Review the summary and click on “Finish”. This will deploy the Accelerator on ESXi Hypervisor.



10. After deployment select your VM and click on edit settings. Make sure all the settings including VM’s SCSI Controller, Hard disk and Network adapter settings should be adjusted according to respective setups.

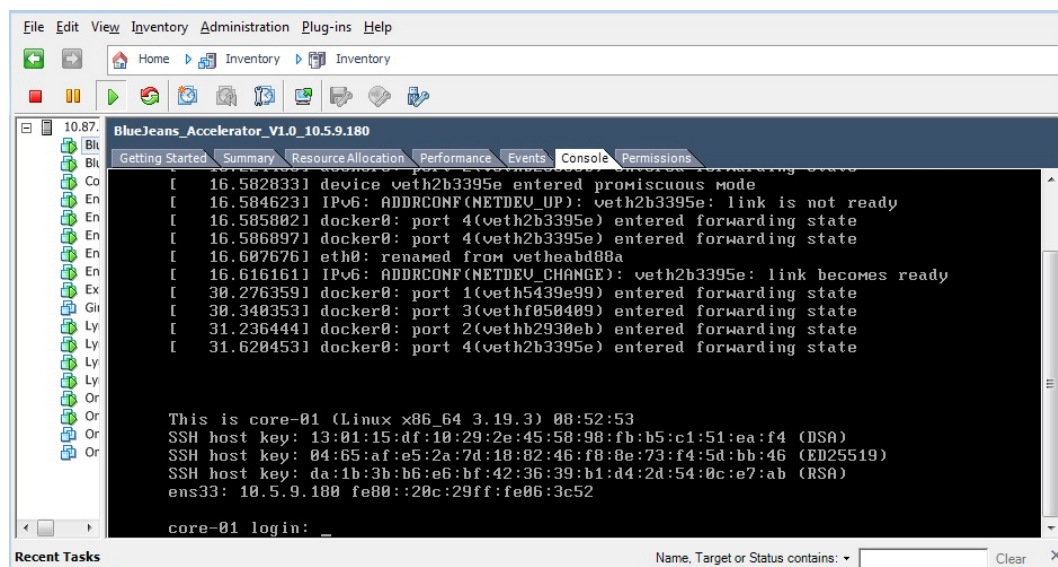


11. Power on the BlueJeans Accelerator VM. For this first select it in the VM list and then right click to select Power-> Power On option.



12. Once the VM is powered ON then navigate to “Console” Tab to start configuration.

13. Click on the console Tab to enter into the console screen.



### 3.3 Configure Accelerator

---

This section will guide you how to configure following:-

- Network settings
- Registering Using Pairing Code

1. Open the console to the VM and login.
2. Using default username “core” and password “core123”.
3. Now admin should change to new Password and confirm it by re-entering it.

```
=====
OnPrem Virtual Machine Setup Wizard
[Version: 5.8]
=====
Please change the password for core
New password: _
```



**NOTE:** Please provide strong password with more than 5 characters and should comprise of upper and lower case letters and numeric characters. Password restriction is not enforced.

---

1. Configure following Network Settings:
  - IP Address : provide internal IP
  - Subnet Mask
  - Default Gateway
  - Primary DNS IP
  - Secondary DNS IP (this is optional and you can skip it by pressing Enter key)



```

=====
      OnPrem Virtual Machine Setup Wizard
      [Version: 5.8]
=====
Enter the host static IP
[ ]
Enter the subnet mask (e.g. 255.255.255.0)
255.255.255.0
Enter the Gateway
[ ]
Enter the Primary DNS
[ ]
Enter the Secondary DNS [Optional]
[ ]

```

Here, system shows configured information and ask for confirmation to save it. Type “y” and press Enter key for saving these settings.

```

-----
Your configuration
-----
Network Interface: [ens192]
Network Type:      [STATIC]
IPv4 Address:      [ ]
Subnet Mask:       [ ]
IPv4 Gateway:      [ ]
Primary DNS:       [ ]
Secondary DNS:     [ ]
-----
Are you fine with the configuration and OK to proceed? Please type (y/n)

```

- Here system shows option to setup Web Proxy.  
Note: This step is optional and can be skipped by opting “n” here.

```

Do you want to setup web proxy? Please type (y/n)

```

Type “y” and press Enter key to configure web proxy. Here Admin can configure HTTP and HTTPS proxy. Following two formats are allowed to enter:

- <protocol>://<proxy\_ip>:<proxy\_port>
- <protocol>://<username>:<password>@<proxy\_ip>:<proxy\_port>

Format parameters:

- <protocol> - http or https
- <proxy\_ip> - IP Address of Proxy
- <proxy\_port> - Port Number of Proxy
- <username> - Username to access Proxy
- <password> - Password to access Proxy

```
Do you want to setup web proxy? Please type (y/n)
y
-----
Enter the HTTP proxy in either of below 2 formats and hit Enter:
1) '<protocol>://<proxy_ip>:<proxy_port>' Ex: http://192.168.1.1:3128
2) '<protocol>://<username>:<password>@<proxy_ip>:<proxy_port>' Ex: https://aa:bb@192.168.1.1:3128
-----
Enter HTTP Proxy: http://denimuser:denim123@10.5.9.118:3128
-----
Enter the HTTPS proxy in either of below 2 formats:
1) '<protocol>://<proxy_ip>:<proxy_port>' Ex: http://192.168.1.1:3128
2) '<protocol>://<username>:<password>@<proxy_ip>:<proxy_port>' Ex: https://aa:bb@192.168.1.1:3128
-----
Enter HTTPS Proxy: http://denimuser:denim123@10.5.9.118:3128_
```



**NOTE:** Web Proxy option is in Beta Phase. Squid proxy is qualified in house with Accelerator.

3. Once all Network setting are configured and applied then Admin is prompted for pairing code.

```
-----
Generate Pairing code from bluejeans admin
-----
Enter the pairing code here
_
```

4. Here provide the Pairing Code which we have generated in section [3.1](#) and then press Enter key.
5. “Pairing Code” Accepted message is shown if you have entered valid pairing code and if your VM is reachable to BlueJeans Cloud for registering this Accelerator Node.



**NOTE:** In following conditions Pairing Code acceptance will fail:

- If Accelerator cannot reach the BlueJeans cloud. (For this make sure that your Network setting are such that Accelerator has internet access and you should be able to ping bluejeans.com)
- If you are providing wrong/invalid Pairing Codes.
- If you are providing a Pairing Code that has already been used. (Pairing code can be used only once for registration and can't be used again, even for the same node.)

6. Once you get the Pairing Code acceptance message then you will be asked to reboot the VM by pressing "Enter" key. Here press "Enter" key to initiate reboot and with this Accelerator deployment process will be over.

```
-----
Generate Pairing code from bluejeans admin
-----
Enter the pairing code here
BksUB_$
Pairing code accepted!
Created symlink from /etc/systemd/system/multi-user.target.wants/optimus-manager.service to /etc/systemd/system/optimus-manager.service.
Created symlink from /etc/systemd/system/multi-user.target.wants/optimus-logger.service to /etc/systemd/system/optimus-logger.service.
Created symlink from /etc/systemd/system/timers.target.wants/optimus-update-window.timer to /etc/systemd/system/optimus-update-window.timer.
##### Needs REBOOT, Press "Enter" to reboot...#####
```

7. After node comes up, login again using default username "core" and with new password. Here Main Menu will be shown. Wait for 30 minutes and then issue command `ctrl+c`, which will show shell prompt. Here issue command `"docker ps"` to show all the four applications with following names: `"quay.io/bjnquay/optimus-manager"`, `"quay.io/bjnquay/optimus-logger"`, `"quay.io/bjnquay/optimus-proxy:X.Y.Z"`, `"quay.io/bjnquay/optimus-cache:A.B.C"`. This signifies that all the applications of Accelerator are up.

```

=====
OnPrem Virtual Machine Setup Wizard
[Version: 5.8]
=====

Select from below menu:
[1] Edit network settings
[2] View registration status
[3] Change password
[4] SSL settings
[5] Proxy Settings
[6] NTP settings
[7] Uninstall the configuration
[8] Reboot
[9] Custom SSL Proxy Settings

Enter your choice:
^C
[core@localhost ~ $ docker ps
CONTAINER ID   IMAGE                                COMMAND
0876ed1454ad   quay.io/bjnquay/stage-optimus-logger:5.2.43   "/usr/bin/nodejs /ho..."
327b14cd5531   quay.io/bjnquay/stage-optimus-manager:5.7.26   "docker-entrypoint.s..."
333c695c2eb5   quay.io/bjnquay/optimus-proxy:1.6.24         "docker-entrypoint.s..."
4d220a252d2b   quay.io/bjnquay/optimus-cache:1.5.67         "docker-entrypoint.s..."
[core@localhost ~ $ ]

```



**NOTE:** All Application containers comes up within 30 Minutes from reboot time. After reboot, latest images are downloaded from BlueJeans Cloud infrastructure and start its services. Therefore all the application containers takes up to 30 minutes. This time is variable and based on the Internet and download speed.

### 3.4 Check Deployed Node Status

The steps below will help you to check the status of Node on Enterprise Admin UI.

Login as Enterprise Admin and navigate to Admin-> Manager Accelerator. Here check following values for deployed Node:

- Registered : **"Yes"**
- Pairing Code : **"Paired"**
- Status : **"Online"**

BlueJeans

MEETINGS EVENTS **ADMIN** COMMAND CENTER RECORDINGS ...

GROUP SETTINGS

MANAGE FEATURES

MANAGE USERS

MEETING HISTORY

EVENTS

RECORDING ACTIVITY

**MANAGE ACCELERATOR**

RELEASE NOTES

Enable onprem for enterprise ☒ UPDATE

| Name           | Registered | Pairing Code | Status |
|----------------|------------|--------------|--------|
| BLR_10.5.9.164 | Yes        | paired       | Online |
| BLR_10.5.9.152 | Yes        | paired       | Online |
| BLR_10.5.9.92  | Yes        | paired       | Online |
| BLR_10.5.9.153 | Yes        | paired       | Online |
| BLR_10.5.9.90  | Yes        | paired       | Online |
| Test           | Yes        | paired       | Online |

+ Add Node



**NOTE:** Registered “Yes” and Pairing Code “Paired” confirms that pairing code used at the time of deployment is accepted and this node is registered a valid Accelerator node with BlueJeans cloud.

Status value shows the node’s state like Online / Disconnected / Drained / Overloaded. Make sure after deployment your node should be “Online” state. It takes ~30 min for a node to come online after deployment.

### 3.5 Check Feature Enablement by Enterprise Admin

Admin should make sure that Onprem Accelerator feature is enabled at enterprise level for all the Primetime events.

To enable this feature navigate to Admin-> Manager Accelerator and here use turn On the toggle button and click on “Update” button.

The screenshot shows the BlueJeans Admin interface. On the left is a sidebar with navigation links: GROUP SETTINGS, MANAGE FEATURES, MANAGE USERS, MEETING HISTORY, EVENTS, RECORDING ACTIVITY, MANAGE ACCELERATOR (highlighted), and RELEASE NOTES. The main content area has a top navigation bar with MEETINGS, EVENTS, ADMIN (selected), COMMAND CENTER, and RECORDINGS. Below the navigation bar, there is a toggle for 'Enable onprem for enterprise' which is currently turned off. Red arrows labeled '1' and '2' point to the toggle and an 'UPDATE' button respectively. Below this is a table with columns: Name, Registered, Pairing Code, and Status. The table contains six rows of data, all with 'Yes' in the 'Registered' column and 'paired' in the 'Pairing Code' column. The 'Status' column shows 'Disconnected' for the first row and 'Online' for the others. A '+ Add Node' button is at the bottom right of the table.

| Name           | Registered | Pairing Code | Status       |
|----------------|------------|--------------|--------------|
| Test           | Yes        | paired       | Disconnected |
| BLR_10.5.9.164 | Yes        | paired       | Online       |
| BLR_10.5.9.152 | Yes        | paired       | Online       |
| BLR_10.5.9.92  | Yes        | paired       | Online       |
| BLR_10.5.9.153 | Yes        | paired       | Online       |
| BLR_10.5.9.90  | Yes        | paired       | Online       |



**NOTE:** Admin should make sure that “Enable onprem for enterprise” toggle button should be turned ON before any Primetime event, if they want attendees to stream via Onprem Accelerator, else all the attendees will stream via cloud directly.



**Caveat:** Make sure that Attendees who are joining outside office/campus where Accelerator is deployed should turn off full-tunnel VPN. This is very important, as we do not want outside attendees to stream via Accelerator deployed at office/campus. This can impact Attendee’s user experience. If full-tunnel VPN is used then, attendees get internal IP of the office and therefore eventually starts streaming via Accelerator, which is not the ideal solution for the Attendees who are streaming from outside. They should stream directly from BlueJeans cloud to get better user experience.

In case of Split-tunnel VPN no action needs be taken, as outside traffic will go directly to Internet and should not be routed via office/campus.

## 4 Manage Accelerator via Node Console

- Introduction
- Main Menu Options
- Manage Network Settings
- View Registration Status on Accelerator
- Change Password
- SSL Settings for HTML5 support
- Web Proxy Support

- NTP Support
- Uninstall Configuration
- Reboot Accelerator

## 4.1 Introduction

---

This section is focused on helping the administrator manage deployed Accelerator nodes. This will help administrator to modify Network settings, Password, add SSL settings, reboot node and even uninstall the complete configuration of any node.



NOTE - After configuring Network settings, Admin can access Accelerator Node setting options via either VM Console using [core] or via SSH login with [onpremuser] and switch to [core].

-----

## 4.2 Main Menu

---

After providing valid username and password, the Accelerator Main Menu is shown. This Menu give following options to Admin user:

1. Edit Network Settings
2. View registration status
3. Change Password
4. SSL settings
5. Proxy Settings
6. NTP Settings
7. Uninstall the configuration
8. Reboot
9. Custom SSL Proxy Settings

```
=====
OnPrem Virtual Machine Setup Wizard
[Version: 5.8]
=====

Select from below menu:

[1] Edit network settings
[2] View registration status
[3] Change password
[4] SSL settings
[5] Proxy Settings
[6] NTP settings
[7] Uninstall the configuration
[8] Reboot
[9] Custom SSL Proxy Settings

Enter your choice:
█
```

Admin can select any of above options to

### 4.2.1 Manage Network Settings

---

Admin can view/modify/manage Accelerator's Network settings using first option on Main Menu.

To select option [1] Edit Network Settings.

Enter your Choice: 1

Selecting this option will display your current Network Configuration. Here if Admin want to edit these settings then type "y" and then Enter.



```

-----
Your configuration
-----
Network Interface: [ens192]
Network Type:      [STATIC]
IPv4 Address:      [ ]
Subnet Mask:       [ ]
IPv4 Gateway:      [ ]
Primary DNS:       [ ]
Secondary DNS:     [ ]
-----
Do you want to edit your configuration? Please type (y/n)
-

```

Here, admin can change any of the following Network Settings:-

- IP Address : provide internal IP
- Subnet Mask
- Default Gateway
- Primary DNS IP
- Secondary DNS IP (this is optional and you can skip it by pressing Enter key)

Existing Network Configuration is shown and if you want to change any setting then type it else hit Enter to skip.

```

Enter your choice:
1
"IPv4 Address" [ ] - Type the new IPv4 Address; hit ENTER to skip
"Subnet Mask" [ ] - Type the new Subnet Mask (e.g. 255.255.255.0); hit ENTER to skip
"Gateway" [ ] - Type the new Gateway; hit ENTER to skip
"Primary DNS" [ ] - Type the new Primary DNS; hit ENTER to skip
"Secondary DNS" [ ] - Type the new Secondary DNS; hit ENTER to skip

-----
Your configuration
-----
Network Interface: [ens192]
Network Type:      [STATIC]
IPv4 Address:      [ ]
Subnet Mask:       [ ]
IPv4 Gateway:      [ ]
Primary DNS:       [ ]
Secondary DNS:     [ ]
-----
. . . . .
#### Needs REBOOT, Press "Enter" to reboot...####

```

After modifying Network Settings, system will show configured information and then apply it and ask for Reboot. Here press "Enter" key to reboot the system.

### 4.2.2 View Registration Status

---

Admin can view the registration status of Accelerator Node by selecting second option on Main Menu.

To select option [2] View registration status

Enter your Choice: 2

```
-----
:                               :
:       Your registration status       :
:                               :
:-----
Registration Status:    Success
Pairing code:          EJ!-u^6b_
Node ID:               5734695ee0fa66337e2c3a1f
:-----
Press any key to go back to main menu...
-
```

This option shows the Registration Status, Pairing Code & Node ID of the Accelerator Node.



**Note:** Main Menu will show option “Register with Pairing Code” if Node is not registered.

---

### 4.2.3 Change Password

---

Admin can change the password of the Accelerator Node any time after the deployment by selecting third option from Main Menu.

To select option [3] Change Password

Enter your Choice: 3

```
Please change the password for coreuser
Changing password for coreuser
Enter the new password (minimum of 5 characters)
Please use a combination of upper and lower case letters and numbers.
New password:
Re-enter new password:
passwd: password changed.
-----
Password changed successfully; redirecting to main menu
-----
```

Admin should change to new Password and confirm it by re-entering it.



**NOTE:** Please provide strong password with more than 5 characters and should comprise of upper and lower case letters and numeric characters. Password restriction is not enforced.

---

#### 4.2.4 SSL settings

---

Accelerator support HTML5 players to stream via it. For Flash player no extra configuration on Accelerator is required but to support HTML5 Admin has to install SSL certificate on Accelerator.

Please refer Chapter 8 for more details on configuring HTML5 support on Accelerator.

#### 4.2.5 Proxy Settings

---

Admin can view/modify/manage Accelerator's Proxy settings using fifth option on Main Menu.

To select option [5] Proxy Settings.

Enter your Choice: 5

```
Please select from menu

: Web Proxy settings:-
: [1] HTTP proxy settings
: [2] HTTPS proxy settings
: [3] To go to main menu
:
Enter your choice:
—
```

Here Admin can select following options:

- Select option [1] HTTP proxy settings, to view/edit HTTP Proxy Settings
- Select option [2] HTTPS proxy settings, to view/edit HTTPS Proxy Settings
- Select option [3] To go to Main Menu, for redirecting Admin to Main Menu

##### 4.2.5.1 HTTP Proxy Settings

Select option [1] HTTP proxy settings. This will display existing HTTP Proxy configuration and provide options to edit and delete these settings.

```

:-----:
:   Your HTTP Proxy configuration   :
:-----:
HTTP Proxy: [http://192.168.1.100:3128]
:-----:
Please select from menu

: HTTP Proxy settings:-           :
: [1] Edit HTTP proxy settings    :
: [2] Delete HTTP proxy settings  :
: [3] To go to previous menu     :
:-----:
Enter your choice:
1
-----
Enter the HTTP proxy in either of below 2 formats and hit Enter:
1) '<protocol>://<proxy_ip>:<proxy_port>' Ex: http://192.168.1.1:3128
2) '<protocol>://<username>:<password>@<proxy_ip>:<proxy_port>' Ex: https://aa
:bb@192.168.1.1:3128
-----
Enter HTTP Proxy: _

```

Select option [1] Edit HTTP proxy settings, to modify HTTP Proxy Settings.

Here Admin can configure HTTP proxy. Following two formats are allowed to enter:

- a) <protocol>://<proxy\_ip>:<proxy\_port>
- b) <protocol>://<username>:<password>@<proxy\_ip>:<proxy\_port>

Format parameters:

- <protocol> - http or https
- <proxy\_ip> - IP Address of Proxy
- <proxy\_port> - Port Number of Proxy
- <username> - Username to access Proxy
- <password> - Password to access Proxy

Select option [2] Delete HTTP proxy settings, for deleting all HTTP proxy settings.

Select option [3] To go to Main Menu, for redirecting Admin to Main Menu.

#### 4.2.5.2 HTTPS Proxy Settings

Select option [2] HTTPS proxy settings. This will display existing HTTPS Proxy configuration and provide options to edit and delete these settings.

```

:-----:
:   Your HTTPS Proxy configuration   :
:-----:
HTTPS Proxy: [http://192.168.1.100:3128]
Please select from menu
:-----:
: HTTPS Proxy settings:             :
: [1] Edit HTTPS proxy settings      :
: [2] Delete HTTPS proxy settings    :
: [3] To go to previous menu        :
:-----:
Enter your choice:
1
-----
Enter the HTTPS proxy in either of below 2 formats:
1) '<protocol>://<proxy_ip>:<proxy_port>' Ex: http://192.168.1.1:3128
2) '<protocol>://<username>:<password>@<proxy_ip>:<proxy_port>' Ex: https://aa:bb@192.168.1.1:3128
-----
Enter HTTPS Proxy: _

```

Select option [1] Edit HTTPS proxy settings, to modify HTTPS Proxy Settings.

Here Admin can configure HTTPS proxy. Following two formats are allowed to enter

- c) <protocol>://<proxy\_ip>:<proxy\_port>
- d) <protocol>://<username>:<password>@<proxy\_ip>:<proxy\_port>

Format parameters:

- <protocol> - http or https
- <proxy\_ip> - IP Address of Proxy
- <proxy\_port> - Port Number of Proxy
- <username> - Username to access Proxy
- <password> - Password to access Proxy

Select option [2] Delete HTTPS proxy settings, for deleting all HTTPS proxy settings.

Select option [3] To go to Main Menu, for redirecting Admin to Main Menu.



The accelerator nodes will use http/https long polling, or websocket, which will keep the connection open to these domains \*pndsn.com \*pubnub.io, \*pubnub.net,\*pubnub.com. Long polling timeout on our side is 320 seconds, please make sure proxy is able to handle long polling requests.

## 4.2.6 NTP settings

---

Admin can view/modify/manage NTP settings using sixth option on Main Menu.

To select option [6] NTP settings.

Enter your Choice: 6

```
-----
Your NTP configuration
-----
NTP Server List: []
-----
Please select from menu
-----
NTP settings:-
[1] Edit NTP settings
[2] Delete NTP settings
[3] To go to main menu
-----
Enter your choice:
_
```

Select option [1] Edit NTP settings, to modify NTP Settings. Here Admin can enter list of NTP Servers, separated by space.

```
Enter your choice:
1
-----
Enter the list of ntp servers, separated by space. Ex: 0.pool.example.com 1.pool
.example.com
-----
Enter NTP servers: _
```



**Caveat:** Editing NTP settings overwrite old NTP servers settings.

---

Select option [2] Delete NTP Settings, for deleting all NTP settings.

Select option [3] To go to Main Menu, for redirecting Admin to Main Menu.

## 4.2.7 Uninstall the Configuration

Admin can uninstall the Accelerator Node's configuration by removing Network settings and Pairing Code by selecting seventh option from Main Menu.

To select option [7] Change Password

```
=====
OnPrem Virtual Machine Setup Wizard
[Version: 5.8]
=====

-----
Select from below menu:
-----
[1] Edit network settings
[2] View registration status
[3] Change password
[4] SSL settings
[5] Proxy Settings
[6] NTP settings
[7] Uninstall the configuration
[8] Reboot
[9] Custom SSL Proxy Settings
-----
Enter your choice:
7
Do you really want to uninstall? Please type (y/n)
y
```

Enter your Choice: 7

```
Do you really want to uninstall? Please type (y/n)
y
Removed symlink /etc/systemd/system/multi-user.target.wants/optimus-cache.service.
Removed symlink /etc/systemd/system/multi-user.target.wants/optimus-manager.service.
Removed symlink /etc/systemd/system/multi-user.target.wants/optimus-proxy.service.
Removed symlink /etc/systemd/system/multi-user.target.wants/optimus-logger.service.
Removed symlink /etc/systemd/system/multi-user.target.wants/optimus-stats.service.
Configuration uninstalled successfully
#### Needs REBOOT, Press any key to reboot...####
█
```

Admin should choose “y” to uninstall all the configuration of the Node and then press any key to reboot after uninstall successful message is displayed.



**Caveat:** Process for uninstallation of node, will reset both [onpremuser] and [core] user password to default password. This brings down the node and should be used with care.

## 4.2.8 Reboot

---

Admin can reboot Accelerator Node by selecting eighth option from Main Menu.

To select option [8] Reboot

Enter your Choice: 8

```
=====
OnPrem Virtual Machine Setup Wizard
[Version: 5.8]
=====

-----
|Select from below menu:
|
| [1] Edit network settings
| [2] View registration status
| [3] Change password
| [4] SSL settings
| [5] Proxy Settings
| [6] NTP settings
| [7] Uninstall the configuration
| [8] Reboot
| [9] Custom SSL Proxy Settings
|
-----
Enter your choice:
8
```

Admin should select “y” to reboot Accelerator.



### 4.2.9 Custom SSL Proxy Settings

In order to be able to do deep packet inspection, i.e. decrypt all the traffic flowing via proxy, accelerator needs to trust the self-signed certificate used by your proxy server. Admin can modify/manage Accelerator's Proxy Server's certificate using ninth option on Main Menu.

```
=====
      OnPrem Virtual Machine Setup Wizard
      [Version: 5.8]
=====

-----
| Select from below menu:                |
| [1] Edit network settings              |
| [2] View registration status           |
| [3] Change password                   |
| [4] SSL settings                      |
| [5] Proxy Settings                    |
| [6] NTP settings                      |
| [7] Uninstall the configuration        |
| [8] Reboot                            |
| [9] Custom SSL Proxy Settings          |
|-----|
Enter your choice:
9 █
```

To select option [9] Custom SSL Proxy Settings

```
Please select from menu

| Web Proxy settings:-                  |
| [1] Edit cert settings                |
| [2] Delete Cert settings              |
| [3] To go to main menu                |
|-----|
Enter your choice:
█
```

Here , Admin can select following options:

- Select option [1] Edit cert settings, to edit the certificate
- Select option [2] Delete cert settings, to delete the certificate
- Select option [3] To go to Main Menu, for redirecting Admin to Main Menu

```

Please select from menu

| Web Proxy settings:- |
| [1] Edit cert settings |
| [2] Delete Cert settings |
| [3] To go to main menu |
|                         |
Enter your choice:
1
-----
Enter the HTTPS proxy Cert in which looks like below:
-----BEGIN CERTIFICATE-----
MIIJKgIBAAKCAgEA6ikpYZSjgMX2iqv/ZL68ACg2FFhwERRn1dkpqRKyoWVIFkmH
eooFna1hHLZ5v7P6SF4UeGerhWkzjUI1oDQFJAdz1P1C0FH7vHKGYKiOKW20Ht9t
Oapc0FB9XbKDjJJWsSjxHID5ONGh5kHQBmSDEUwV9uTbWwk7nCpGRjiICIKyGMZ
h51mqhXn4cobGzevDvQIJqz6/07kqndvMNdRHAKUPDxebjoxVLM9iZ78t4E0Sg==
-----END CERTIFICATE-----
-----
Paste CA Certificate for HTTPS Proxy and wait for a couple of seconds (DO NOT PRESS ANY KEY):
█

```

After pasting the certificate, wait for a couple of seconds. Certificate will be added to the trust store and Admin will be taken out of that screen. Reboot the machine as instructed in order to make those changes take effect.

Once rebooted, Accelerator is all set up to stream the event. Not only you will see the calls flowing through the configured proxy but you should also be able to decrypt the HTTPS calls.

## 5 Manage Accelerator via SSH to Node Console

- [Introduction](#)
- [New Node Installation](#)
- [Upgraded Node](#)

### 5.1 Introduction

---

This section is focused on helping administrator to access Accelerator Node using SSH console. It provides details to use SSH for a new Accelerator Node installation and for already existing Accelerator Node.

### 5.2 New Node Installation

---

After the Accelerator Node is setup and configured, we can use SSH console and follow these instructions to manage accelerator:

- 1- Login to your Accelerator Node using [onpremuser] and default password [onprem123].

```
ssh onpremuser@XX.XX.XX.XXXX
```

- 2- After login, the system will force the user to change the password of [onpremuser] and from next time, user is required to login with the new password.
- 3- To make any modification into accelerator node and to get Main Menu options, you need to login into [core].
- 4- To login into [core] use "su - core" command and most recent [core] password.

```
onpremuser@localhost ~ $ su - core  
Password: 
```

## 5.3 Upgraded Node

---

This Section is focused on helping administrator to access Accelerator Node and Menu Options using SSH console when the node is upgraded to the latest version:

- 1- SSH Terminal logging with/as [core] user will be disabled. Now you have to login SSH Terminal with/as [onpremuser].
- 2- Login to your Accelerator Node using [onpremuser] and default password [onprem123].

```
ssh onpremuser@XX.XX.XX.XXXX
```

- 3- After login, the system will force the user to change the password of [onpremuser] and from next time, user is required to login with the new password.
- 4- To make any modification into accelerator node and to get Main Menu options, you need to login into [core].
- 5- To login into [core] use “su – core” command and most recent [core] password.

```
onpremuser@localhost ~ $ su - core  
Password:
```



**NOTE:** After accelerator is upgraded, there will be an automatic restart however it doesn't restart while it's handling an active event. With each unsuccessful login attempts there will be login delay.

---

## 6 Manage Accelerator via Enterprise Admin on BlueJeans Cloud

- Introduction
- View Accelerator Nodes of Enterprise
- Modify Accelerator Node Configuration
- Remove Node

### 6.1 Introduction

---

This section is focused on helping administrator to view and manage an already deployed Accelerator Nodes on BlueJeans Network cloud.

This will help Admin to modify already configured Node's Name & also allow admin to add/modify Public IPs of Enterprise.

### 6.2 View Accelerator Nodes of Enterprise

---

To view and manage Node on BlueJeans Cloud follow these instructions: -

1. Login to your BlueJeans account by using your Enterprise Username & Password at URL: <https://bluejeans.com>
2. Once you access your account then navigate to Admin -> Manage Accelerator.
3. All the nodes deployed in an enterprise is displayed here.

BlueJeans
MEETINGS
EVENTS
ADMIN
COMMAND CENTER
RECORDINGS
...

GROUP SETTINGS
MANAGE FEATURES
MANAGE USERS
MEETING HISTORY
EVENTS
RECORDING ACTIVITY
MANAGE ACCELERATOR
RELEASE NOTES

Enable onprem for enterprise
UPDATE

| Name           | Registered | Pairing Code | Status |
|----------------|------------|--------------|--------|
| BLR_10.5.9.164 | Yes        | paired       | Online |
| BLR_10.5.9.152 | Yes        | paired       | Online |
| BLR_10.5.9.92  | Yes        | paired       | Online |
| BLR_10.5.9.153 | Yes        | paired       | Online |
| BLR_10.5.9.90  | Yes        | paired       | Online |

+ Add Node

Here following fields for each node are shown:

- Name** : Specifies node name
- Registered** : Values – **Yes/No**  
Indicate that Accelerator node is registered or not.
- Pairing Code** : Values – alpha numeric value(Pairing Code) / paired  
Indicate that this node is paired or not.  
The pairing code is only shown when the node has not been paired.
- Status** : Shows Node status and can have value:  
**Online** – when node is UP and connected  
**Disconnected** – when node is Down/Disconnected  
**Draining** – when Admin drained this node.  
**Overloaded** –when node is overloaded i.e. CPU utilization/memory usage/ bandwidth usage is more than 75%)
- Edit Icon** : Allows Admin to edit the node settings.

## 6.2.1 View Node Specific Information Name

To view Node specific information follow these instructions: -

- Click on Edit icon of any node.
- This will open a new page displaying all the Accelerator node information.

The screenshot shows the BlueJeans Admin interface. The top navigation bar is blue with the BlueJeans logo and tabs for MEETINGS, EVENTS, ADMIN (selected), COMMAND CENTER, RECORDINGS, and a menu icon. A left sidebar lists various settings: GROUP SETTINGS, MANAGE USERS, MEETING HISTORY, RELEASE NOTES, EVENTS, RECORDING ACTIVITY, and MANAGE ACCELERATOR (which is highlighted). The main content area is titled 'Edit Node' and includes a 'BACK TO NODES LIST' link. The form contains the following fields: Name (BLR-ACE-1), Public(WAN) IP Address (X.X.X.X), Internal(LAN) IP Address (Y.Y.Y.Y), Available Bandwidth (10000 mbps), Status (Online), Draining (toggle switch), and Accelerator (checked checkbox). At the bottom right, there are 'REMOVE' and 'SAVE' buttons.

Here following fields for each node are shown:

- **Name** : specifies node name
- **Public IP Address** : shows Public IPs  
Note: First Public IP is auto populated at the time of registration. Admin can add more Public IPs based on their Network setup and requirement.
- **Internal IP Address** : shows Internal IP address specified by Admin at the time of deployment.

- **Available Bandwidth** : shows available bandwidth of any node (in Mbps).
- **Status** : shows Node status and can have value:  
**Online** – when node is UP and connected  
**Disconnected** - when node is Down/Disconnected  
**Draining** – when Admin drained this node.  
**Overloaded** –when node is overloaded i.e. CPU utilization/memory usage/ bandwidth usage is more than 75%)
- **Draining** : shows draining status.

## 6.3 Modify Accelerator Node configuration

---

Admin is allowed to modify only following four values and rest all are read only:

- Name
- Public IP Address
- Draining
- Centralized Internet : Private Network Address (This topic is covered in Chapter 7)

### 6.3.1 Modify Node Name

---

To modify Node name follow these instructions: -

- Click on Edit icon of a node which you want to modify.
- This will open a new page displaying all the information of the Accelerator node.
- Here you can edit Name field.
- You can use any alphabet/number/special character in the Node name.
- Then click on “Save” button to save it.



**BlueJeans** MEETINGS EVENTS ADMIN COMMAND CENTER RECORDINGS ...

GROUP SETTINGS  
MANAGE USERS  
MEETING HISTORY  
RELEASE NOTES  
EVENTS  
RECORDING ACTIVITY  
**MANAGE ACCELERATOR**

### Edit Node [← BACK TO NODES LIST](#)

Name **Abc123&^\$**

Public(WAN) IP Address **X.X.X.X**

Internal(LAN) IP Address **Y.Y.Y.Y**

Available Bandwidth 10000 mbps

Status Online

Draining ☐

Accelerator ☒

**REMOVE** **SAVE**

### 6.3.2 Add/Modify Public IPs

To add/modify Public IP Address of a node follow these instructions:

- Click on Edit icon of a node which you want to modify.
- This will open a new page displaying all the information of the Accelerator node.
- Here you can add/modify Public IP Address of a node.
- Then click on “Save” button to save it.



**Note:** Give valid IP addresses. Admin can give multiple IP addresses separated by “,”. Admin can even mention network address in CIDR format.

**BlueJeans** MEETINGS EVENTS ADMIN COMMAND CENTER RECORDINGS ...

GROUP SETTINGS  
MANAGE USERS  
MEETING HISTORY  
RELEASE NOTES  
EVENTS  
RECORDING ACTIVITY  
MANAGE ACCELERATOR

### Edit Node [← BACK TO NODES LIST](#)

Name **Abc123&^\$**

Public(WAN) IP Address **X.X.X.X , W.W.Z.Y/24**

Internal(LAN) IP Address **Y.Y.Y.Y**

Available Bandwidth 10000 mbps

Status Online

Draining ☐

Accelerator ☒

REMOVE SAVE

### 6.3.3 Enable/Disable draining of a Node

To enable/disable Draining that allows the admin to stop streaming on that particular node without taking the accelerator node offline. To enable/disable Draining of a node follow these instructions: -

- Click on Edit icon of a node which you want to modify.
- This will open a new page displaying all the information of the Accelerator node.
- Here Admin can switch ON/OFF the draining button by clicking on it. By default this option is disabled.
- Then click on “Save” button to save it.

**BlueJeans**

MEETINGSEVENTSADMINCOMMAND CENTERRECORDINGS...

GROUP SETTINGS  
MANAGE USERS  
MEETING HISTORY  
RELEASE NOTES  
EVENTS  
RECORDING ACTIVITY  
MANAGE ACCELERATOR

### Edit Node

[← BACK TO NODES LIST](#)

NameAbc123&^\$

Public(WAN) IP AddressX.X.X.X , W.W.Z.Y/24

Internal(LAN) IP AddressY.Y.Y.Y

Available Bandwidth10000 mbps

StatusOnline

Draining☐

Accelerator☒

REMOVE

SAVE



**Note:** If user enable draining for a node and when that node is streaming the event then there will be no effect on active streaming but there will be no new streaming on that node until user disable draining.

## 6.4 Remove Node

Admin can remove any node from the list of the nodes installed in an enterprise. Follow these instructions to remove any node: -

- Click on Edit icon of a node which you want to remove.
- This will open a new page displaying all the information of the Accelerator node.
- Here click on “Remove” button.

**BlueJeans**

MEETINGSEVENTSADMINCOMMAND CENTERRECORDINGS...

GROUP SETTINGS  
MANAGE USERS  
MEETING HISTORY  
RELEASE NOTES  
EVENTS  
RECORDING ACTIVITY  
MANAGE ACCELERATOR

### Edit Node

[← BACK TO NODES LIST](#)  

Name

Abc123&^\$

Public(WAN) IP Address

X.X.X.X , W.W.Z.Y/24

Internal(LAN) IP Address

Y.Y.Y.Y

Available Bandwidth

10000 mbps

Status

Online

Draining

☐

Accelerator

☒

REMOVE

SAVE



**Caveat:** Once any node is removed it can't be recovered and Admin has to install that node again.

## 7 Centralized Internet

- Introduction
- Know Your Setup
- Centralized Internet Nodes Configuration

### 7.1 Introduction

---

This section is focused on helping administrator to understand different kind of networks where Accelerator can be deployed and configured.

This section is focused on configuring Centralized Internet Setup.

### 7.2 Know Your Setup

---

Admin should know their enterprise network/setup before deploying Accelerator nodes. Based on the Internet gateways in an enterprise, we have classified enterprise networks in following three categories:-

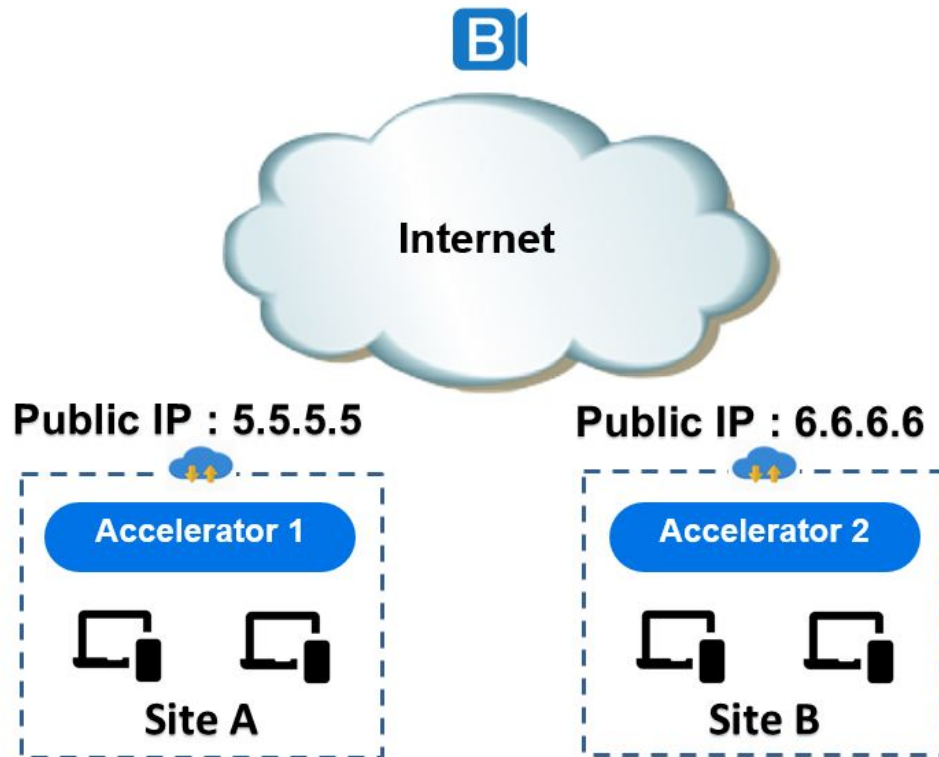
- Decentralized Internet
- Centralized Internet
- Hybrid Setup

#### 7.2.1 Decentralized Internet Network

---

Decentralized internet networks have Internet gateway at each site from where Attendees will stream Primetime event. This means that all the attendees and Accelerator nodes deployed in these sites can access internet directly.

As each site has its own Public IP to connect Internet, therefore sites can be identified distinctly by BlueJeans cloud.



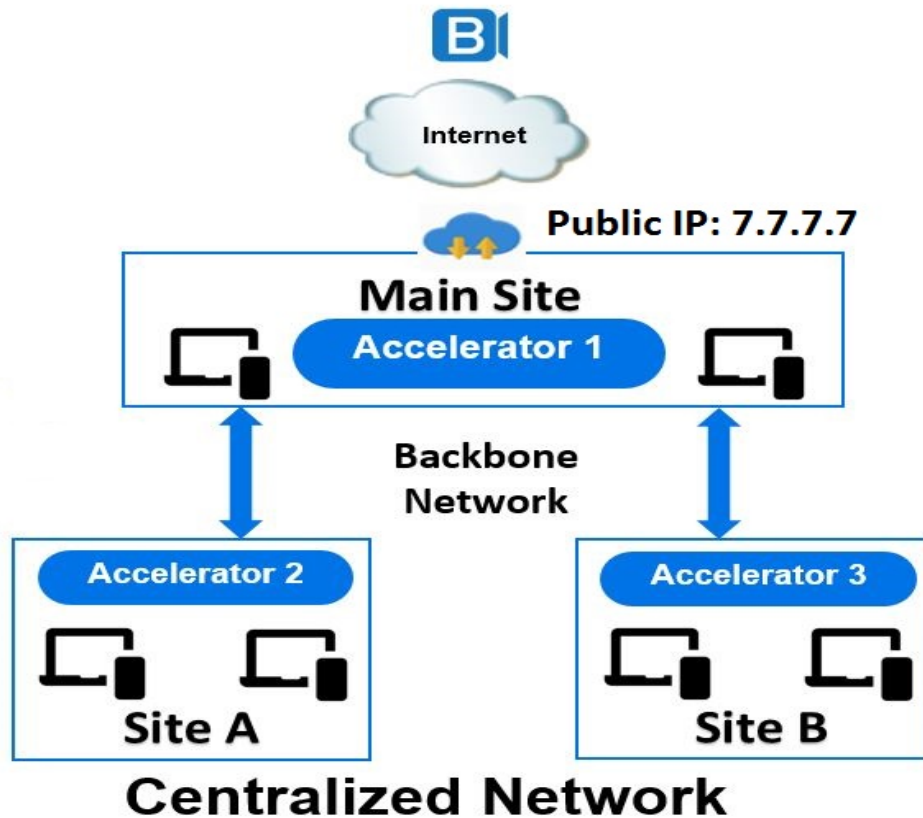
\* Public IP mentioned above is just for reference.

For such networks where all the sites in the enterprise have direct internet access, deploy Accelerator at each site and follow the deployment and configuration process mentioned in Chapter3 and no extra configuration is required.

## 7.2.2 Centralized Internet Network

---

Centralized internet networks have Internet gateway at main site and rest all the sites are connected to main site to get Internet access. In this setup attendees and Accelerator nodes deployed at even sub sites are using the same Public IPs (of main site) to connect Internet.



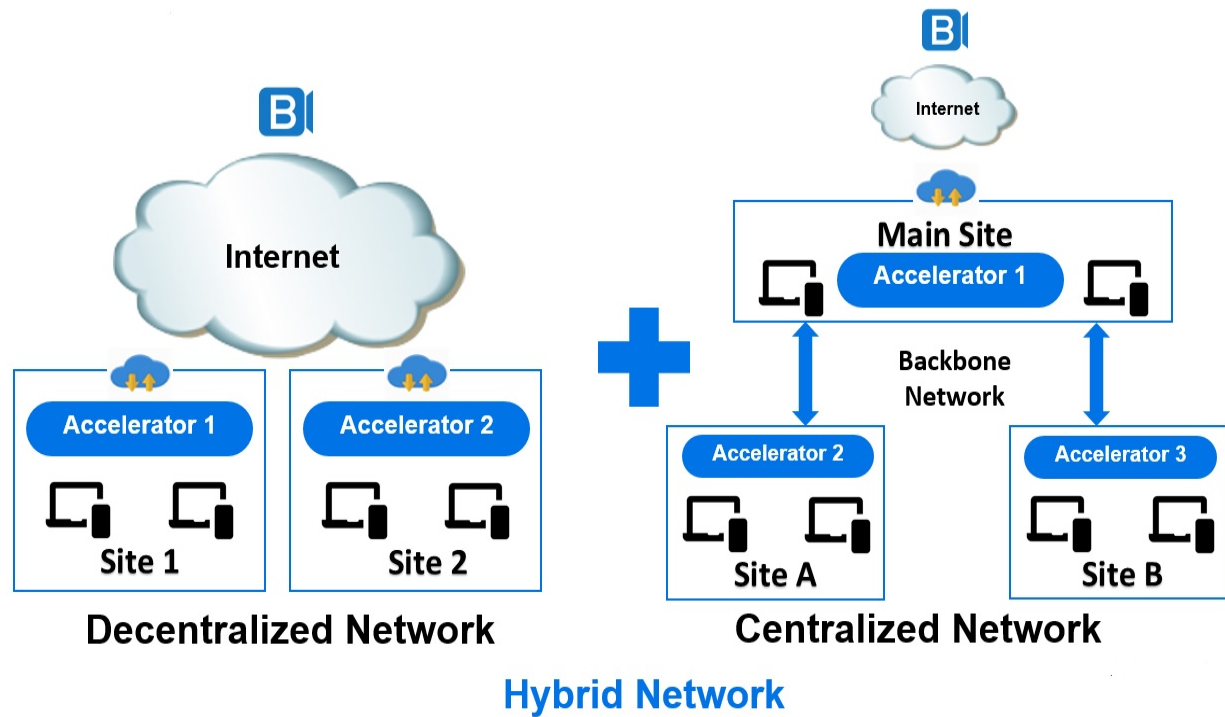
\* Public IP mentioned above is just for reference.

In centralized internet setup if admin wants to deploy Accelerator nodes even at Sub sites, then first follow the basic deployment process mentioned in Chapter 3 and then configure centralized internet specific configuration. Please refer next section 7.3 to get more details about the Centralized Internet Configuration.

### 7.2.3 Hybrid Network

---

In Hybrid Network an enterprise can have multiple sites, where some sites have direct internet access and some are connected via Internet Gateway sites.



For Accelerator nodes deployed at decentralized sites, like nodes on Site1 & Site2 illustrated in above image, follow the basic deployment process mentioned in Chapter 3 and no extra configuration is required.

For Accelerator nodes deployed in centralized internet sites, like nodes on Main Site, SiteA & SiteB illustrated in above image, first follow the basic deployment process mentioned in Chapter 3 and then configure Centralized Internet specific configuration. Please refer next section 7.3 to get more details about the Centralized Internet Configuration.



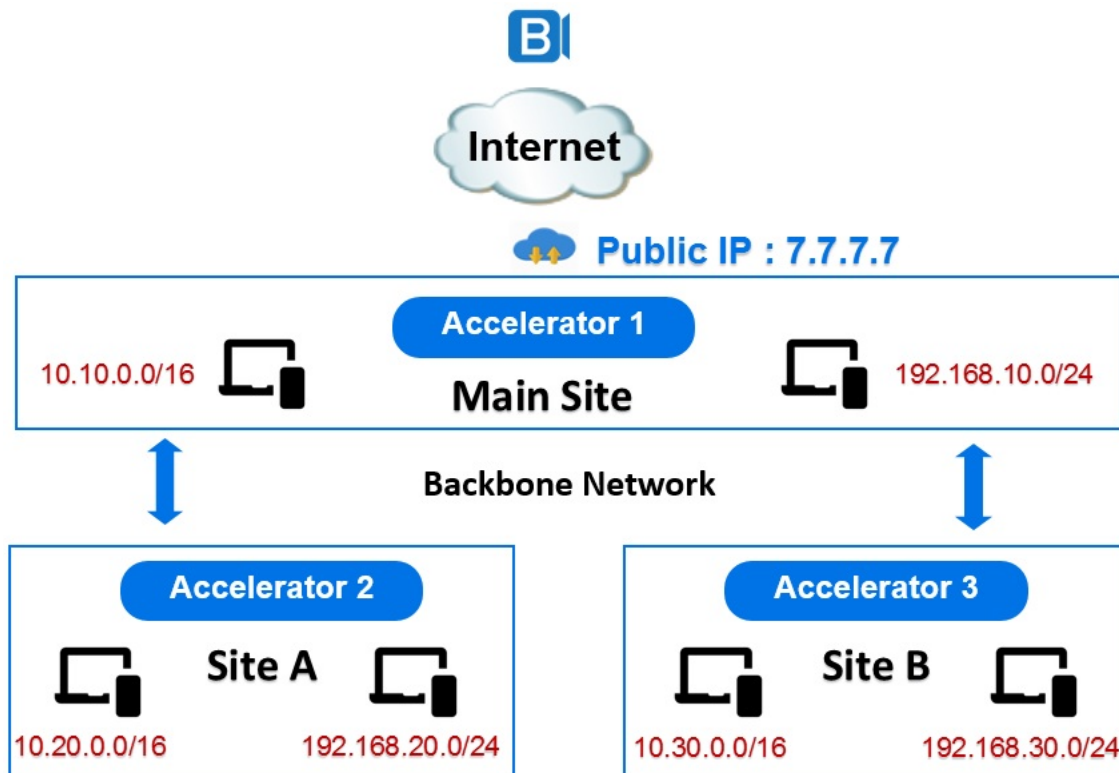
## 7.3 Centralized Internet Nodes Configuration

First deploy Accelerator nodes at all the sites and make sure they are online by following the steps mentioned in [Chapter3](#).

Once all the nodes of Centralized Internet Sites are UP then configure the unique Private Network Address on each site via BlueJeans Admin Portal.

### 7.3.1 Configuration concepts with example

Let's take an example to understand this process. Below is one Centralized internet setup with two sub sites and one Main Site which is connected to internet.



\* Public IP & Private Network Address mentioned above is just for reference.

\* Attendees in these sites are associated with anyone of the Private Network Addresses mentioned in that site.

Each Accelerator node is configured with unique Private Network Address from where attendees will join Primetime event.

Example of configuration on each Accelerator nodes:

- Accelerator 1 – 10.10.0.0/16, 192.168.10.0/24
- Accelerator 2 – 10.20.0.0/16, 192.168.20.0/24
- Accelerator 3 – 10.30.0.0/16, 192.168.30.0/24

### 7.3.2 Configure Private Network Address via Admin Portal

---

The steps below will help you to configure Private Network addresses on Accelerator nodes deployed in centralized internet configuration.

- Login to your BlueJeans account by using your Enterprise Username & Password at URL: <https://bluejeans.com>
- Once you access your account then navigate to Admin -> Manage Accelerator.
- All the nodes deployed in an enterprise are displayed here.
- Click on Edit icon of a node which is the part of centralized internet setup.
- Here add Private Network Addresses under Centralized Internet section and use space bar, enter key or comma “,” button to enter the configuration.

BlueJeans

MEETINGS EVENTS **ADMIN** COMMAND CENTER RECORDINGS ...

EVENTS

RECORDING ACTIVITY

**MANAGE ACCELERATOR**

Accelerator ☒

Centralized Internet

Private Network Addresses

10.20.0.0/16 192.168.20.0/24

REMOVE SAVE

\* This example shows the Private Network Address configuration on SiteA.

- Click on “SAVE” button after adding Private Network Addresses to save the configuration.



**Note:** Deploy Accelerator nodes in all the sites of Centralized Internet setup. Make sure that attendees from all the sites should be able to reach all the deployed nodes.

For example in Centralized Internet Setup mentioned in last section, attendees of SiteA should be able to access Accelerator nodes of Main Site and SiteB. Similarly, attendees of Main Site should be able to access Accelerator nodes of SiteA and SiteB. This is mandatory requirement in order to select the correct Accelerator Node for attendees to stream Event.

## 8 HTML5 support on Accelerator

- Introduction
- Prerequisites
- Certificate Provisioning
- Steps for configuring New Accelerator for HTML5 support
- Simplified Provisioning

### 8.1 Introduction

---

Accelerator support HTML5 players to stream via it. For Flash player no extra configuration on Accelerator is required but to support HTML5 admin has to do additional configuration on Accelerator.

HTML5 player uses HTTPS to stream via Accelerator. For SSL/TLS communication between server (Accelerator) and client (Attendee), we have to include Certificate & Private key in .pem format (without passphrase) on Accelerator. This chapter is a setup guide for HTML5 Accelerator.

**NOTE:**

- Please contact BlueJeans Customer Support in order to enable HTML5 on Accelerator after importing certificates and Private keys on Accelerator nodes.
  - In order to opt-in for simplified provisioning, jump to section [8.5](#). And you can skip the whole manual process of certificate provisioning.
- 

### 8.2 Prerequisites

---

- Latest OVF / Accelerator Software: BlueJeans\_Accelerator\_V2.6
  - SSL Certificate and Private Key for each Accelerator node.
  - Fully managed internal PKI for Enterprise (recommended)
- 

**NOTE:**

- While generating SSL certificate for an Accelerator set Subject Alternative Name (SAN) under DNS and IP to its Private IP address. In case of multiple nodes (for convenience sake), you can enter up to 11 Private IPs as SAN under a single certificate. Some common FAQs related to accelerator can be found [here](#)

- Firefox browser does not use system trust store; therefore, enterprise root CA should be manually imported into browser Trust store.
- Please check [here](#) for HTML5 player supported browsers.

## 8.3 Certificate Provisioning

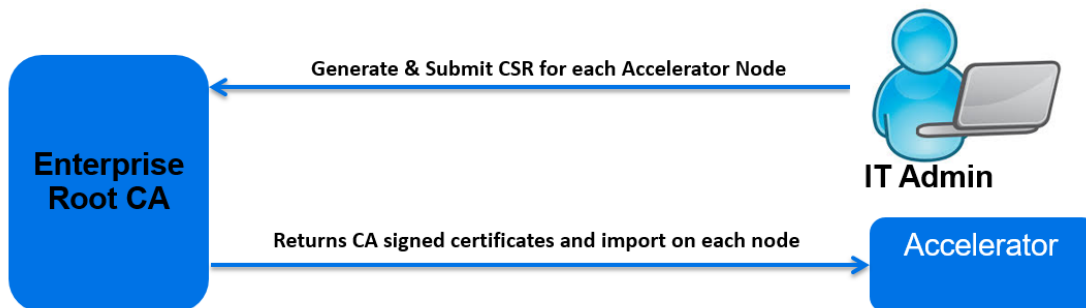
1. Create certificate signing request [with CN (suitable FQDN) and subject alternative name (SAN) with Private IP] of each Accelerator Node.
2. Get this CSR signed by internal enterprise Root CA.



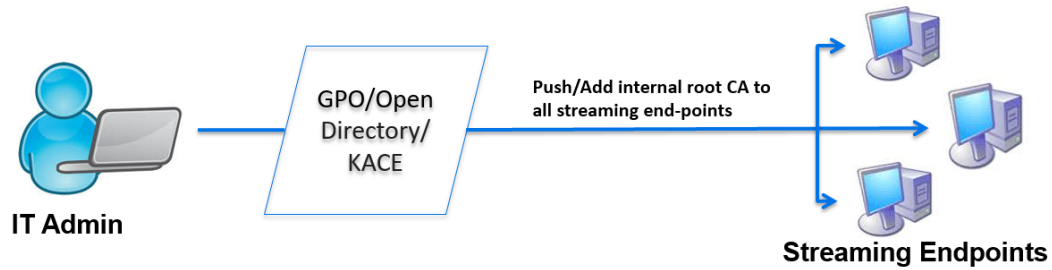
**Note:**

- Make sure the signed certificate and the private key is generated in .pem file format (base64 encoded) and should not have passphrase, as this is the only format accepted while importing the certificate and private key onto the Accelerator.
- If there is no enterprise Root CA available, then self-signed certificates can be created using OpenSSL and imported on the Accelerator node. Refer to [Annexure 1](#) for instructions to generate self-signed certificate

3. Install signed certificate on Accelerator Node. (Please refer next section 8.4 for more details)



4. Push the enterprise root CA to all streaming endpoints (user systems like desktops/laptops which will receive Primetime Event stream via Accelerator).



**Note:** Make sure the signed certificate and the private key is generated in .pem file format (base64 encoded) and should not have passphrase, as this is the only format accepted while importing the certificate and private key onto the Accelerator.

## 8.4 Steps for configuring Accelerator for HTML5 support

This section will help admin to import Certificate & Private Key on Accelerator.

### Steps:

1. Deploy Accelerator Nodes. (Please refer Admin Guide [Chapter3](#))
2. After deployment, SSH to Accelerator node, you will find Main Menu.

```

=====
                OnPrem Virtual Machine Setup Wizard
                [Version: 5.8]
=====

-----
|Select from below menu:
|
|   [1] Edit network settings
|   [2] View registration status
|   [3] Change password
|   [4] SSL settings
|   [5] Proxy Settings
|   [6] NTP settings
|   [7] Uninstall the configuration
|   [8] Reboot
|   [9] Custom SSL Proxy Settings
|
|-----
Enter your choice:
█

```

- Here select option “[4] SSL Settings”. This will show Sub Menu with following three options:

- [1] View/Edit Signed certificate
- [2] View/Edit private key
- [3] To go to main menu

```

Please select from menu

| SSL settings:-
|   [1] View/Edit Signed certificate
|   [2] View/Edit private key
|   [3] To go to main menu
|
|-----
Enter your choice:
█

```

- Here select option “[1] View/Edit Signed certificate”. This will show Certificate on this Node. Initially no certificate is imported therefore select “y” to import certificate. Here copy paste certificate (should be .pem file format) and press Enter (twice).

```

Do you want to update certificate? Please type (y/n): y
Please paste signed certificate in .pem (Base64 encoded certificate, starts with '-----BEGIN CERTIFICATE-----' and ends with '-----END CERTIFICATE-----' )
Press Enter twice after pasting the certificate
-----BEGIN CERTIFICATE-----
MIIF1TCCA72gAwIBAgIJANs/N39jyBQQA0GCSqGSIb3DQEBBQUAMIGAMQswCQYD
VQQGEwJ1TjEMMAoGA1UECAwDS0FSMQwwCgYDVQQHDANCTFExCzAJBgNVBAAkMjK
MQswCQYDVQQLDAJQVDETMiBEGA1UEAwkMTAuNS45LjE4MzEmMCQGCSqGSIb3DQEJ
ARYXbXNpbmdoQGJsdWVqZWVuc251dC5jb20wHhcNMTcwMjAxMTIwMTUyWncNMTgw
MjAxMTIwMTUyWjCBgDELMAkGA1UEBhMCU4xDDAKBgNVBAGMA0tBUjEMMAoGA1UE
BwwDQkxSMQswCQYDVQQKDAJCSjELMAkGA1UECwwCUFQxEzARBgNVBAMMCjEwLjUu
0S4xODMxJjAkBgkqhkiG9w0BCQEWZ1ZaW5naEBiLmVhbnNuZXQuY29tMIIC
IjANBgkqhkiG9w0BAQEFAAOCAg8AMIICCgKCAGEAxsqYqGRAnhqsYhRmiIwcmq+L
sTTkDhV3Cj8g9KnZC9nA86crAAurif1E4rHMzEeGMQbLNEf1wRq+ULwQxuV0EGLJ
jfnQv+Vvx7xqhf7r68+4GirMpV2VngZh6XX7CEeGqISr3skQV3DL7B806FRq9qzN
ryIGcqSvanqes+1QyCmLVaTQyIJ45GMg3Fq6rsR1oMLVgHp6QzUoxjiGP/oEfjVJ
bYDDez4g9XK138XHvraqFan9WUX0Q2owgnV1StZ09JFE/t2LCUn/d3NM1N3NmB
P+h1GEEPcM07QYk50Lke63snLjIjtGKDAF7nSG3P/tMA20F/z48GFL+u4vJXi4Wy
6UJY+28PI/BUXBjh1/IFkbAyh+V+vzX/+EsYmXguXbeYeiXtpX/gbiGyvAqxyjJL
UJb0e2bzSskPfw75B9ngcJcyIognQP8Q1pomSuMtugaSyuUnWb/2GLtyRV80Ua
1MbEDdPa7hpaqx7FRQYDDQgp3IWHdMlqgXf1b/SWZeSLV407GM0MPuDP5yo8Xgwj
Mjo+FnaSyxjuLTJ+BIjFCH+hBcIt8RjPiv0MvPLXux+U2cUR8sB7wuk62KorUdgF
n4TVkzChriMQAr2CjLbpY3P+0BfGfysYB9KS00e9u+UkPHfo53Yo0cqJXVpzV1Nk
4KG7QRiQevh7Zn4tEeUCAwEAANQME4wHQYDVR0OBBYEFm+SqL2o3qTf75M0ZmL/
kRraHiY+MB8GA1UdIwQYMBaAFm+SqL2o3qTf75M0ZmL/kRraHiY+MAwGA1UdEwQF
MAMBAF8wDQYJKoZIhvcNAQEFBQADggIBAMToeDagTeR2k0/a6QitBxTSwFtyC9V
0ct1GHE7GEAiKsJ53qzQmiYte+207n5ymtKt7Pz1TPxja4N10hNqshXiX5AqCO+
n2JTM6TQsKDeF6YCfZT55KAL9nVtuHwKCNjvBcT9Mo2u1kAZXWUkXs0gWot2/A
LEq/0q3c75Jy/fSfi+o108X21egV7yweS9H1cDLzdDW7/frBWBQ+DZduK1sg3Yf5
bdDmM44otSoF7MvuuKK9KjTFMfd9IJ7rodDTm5019FgR0RY9qR5VCYoZP0BB4Q9j
ntq+sR8ANYt8ocEGRDn3Z5iTP8aLegvfw+o+j3Xp4mp2z6V1j/mc7exMhb1snEgH
NPbZgWciSJDr0diEb5HWUmooz6DQh2p/YLYdCxn3v6vTvE3xqN4VAGUgm8A8q7RD
dJrD/VdUiUDsjAp/K+809yxafWX/LgqoWXd1jWYwJnBBFrmx7fHrZb7v0Z8ynjWN
GgaAa1RXqAtqhAkunhNdFVM/8IbAPJuf+Uz3fWaYx6j1111xwFhBgWu1DSQ+e9d8
RdsyglRJaXcj4T1zJ4wCCqXJ1sJSQSnAVpoC2PAEuIfzyhf5d4S01DRf+kC5TI+b/
raqVUG3vg1j4rwTnxXC4JBjyQABjHfMScfzPikv/Vvu8jOWiF9puaI708Xq7SLaA
WzhilqzEua3I
-----END CERTIFICATE-----

```

- Now again select option “[4] SSL Settings” in Main menu and further select option “[2] View/Edi0074 private key” in Sub-Menu. This will show Private Key on this Node. Initially no key is imported therefore select “y” to import Private Key. Here Copy paste Private Key (should be .pem file format without passphrase) and press Enter (twice).



```

Do you want to update private key? Please type (y/n): y
Please paste private key in .pem (Base64 encoded certificate, starts with '-----BEGIN PRIVATE KEY-----' and ends with '-----END PRIVATE KEY-----' )
Press Enter twice after pasting the key
-----BEGIN PRIVATE KEY-----
MIIRQIBADANBgkqhkiG9w0BAQEFAASCCS8wgkrgAgEAAoICAQDGypioZECeGqxi
FGaIjByar6WxNOQMe/cKPyD0qdkL2cDzpsAC6uJ/UTisczMR4Yx8ss0R/XBGr5S
XBDG5XQQYsmN+dBX5W/HvGqF/uvrz7gaKsYLXZG8mHpdfsIR4aohKveyRBxc0Xs
Hw7p9Gr2rM2vIgzYpK9qep6z7VDIKaVVPNDIgnjYyDcWrquxHWgtWAenpDNSjG
OKCn+gR+NUltgMN7Pir1corXfxc+taoVqf1ZRfRDaJCcdWVXK1nT0kUT+3YsJ5f
93c0zU3c2YE/6HUYQQ9ww7tBiTK6WR7reycuMi00YoMB/udIbc/+0wDbR/PjwZ8
v6718leLhLpQlj7bw8j8FRcG0HX8gWRsDKH5X6/Nf/4SxiZeC5dt5h6LF0L+Bu
IbK8CrHKOMtQLvR7Zv0xKQ9/C3DvkH2eBwLzIiCdA8FDWmiBm4x06BpLK5SdZv/
YYu3JFXw5RqUxsQN09ruG1qrHsVFBgMNCnchYc0YuqBd/Vv/LZL5ItXjTsYzQw+
40L1KjxeDCMy0j4WdpLLG06VMn4EiMUJf6EFwi3xGM+K/Oy8+Ve7H5TZXRHywHvC
6TrYqitR2AWfh0+TMIEuIXAcvYKMu1jc/44F8Z/KxgH0pI7R7275SQ8d+jndiJR
yoLdWnNXU2TgobTBEip6+Htmfi0R5QIDAQABAOICAQCeTmxvFrawUJZGBsb1NeDa3
Q0Vfyg0gOvkbw1xiWjdNRRwcizdGg4Kf3TCtGKxKqF7DwacEvW8dMqh0KdAdEB
04mq1IwD0yTHLNAVyqh6Z9sy2i7ZKc0PLbn/TwMQPtWPKcfE7N1kpPWUqc8YpJoh
ws8xbqkv1tISu39yzcQNAo0lvMC/TJe1WP0sR1xvH0iHk2CupdqDduv3ntThsAqv
7w0AfpAtrv5K5GKI5h6LfyNt90Rd+ZmT04rWqzo6/yXwJYWO9W/1pflVwpSdoDkn
bNau7BGdtRv0swqGUB8QxjQHvTWGxksEtYaaqKHIVhprVeFSvu2Kft2troA5HsBz
ZR/r7516UxjsznTEBuwEYvR110AIZWu501gtN2X+YB2q6iFToo8LNFQAKyzvY2C
US9v96xK61ML5X1a1eVgP04ikUMXerFw0d/uapuk6FKPGHj1tCtH0HX1SvJM
uyuaqN7A/rD0zEnMXt/1R8v0qKlx3nhSiQK/LtkYPhxnZ/xwTA0zI7+9AYCEJkKe
ENjrh3NjQ/+4f95S3aj14dc3TZAANNuLp0c9g82XVS47frrhDn0G1F/TRmML7hMcS
AGTSUgRQ9dJERO0IXMKQAFpwVtfm10T1Mpj0pfCU64daiIY7dekP195y3Hq81555
RHLL4aoFdTCBvdbXrtwQgKCAQEA9EJoLN5+KH/gFJAT2NuAEyAVUAmrXsHCUHF4
wZvjhNpIw8cftZK4+39svCSG7cwun7Cg+nLlw0NiRa3o0F3HHwMaWQtdCR11/y
ECFSH6R6H1ok7+JrU2Ec8IZBbF/Nj4wRa1aUgLS0AUWB7e8prnhLYHVx2Qqb1m
k8q2emUy7CED1j+moM4Qv8D04yMD8BaaDBj168vG2mx+2pAFQswSHV2E9+96R4Be
bgHH7+sTN4pEYeR8zSYZGnMrxVBw6SraFcLasDJJDvXr8zcs2obqfTS0ahniGZ
jnXt01vYYZdhMoLtpajA0v2cw2buYm5Z8cmdWu0LYCbPLAjPsQKCAQEA0Fi1gzCL
wAjYPg7tLSLH/KA4IbKvxTVxhq+jjsTBW07Gocdu1p27V1L2Z+TZnuWAIpZuHx0+
a0bxz8TRKxQjlk4V+G21y0jxi1QZpxJbZ9RbmABT0TEwi2qs+DhDQ3yGkMhD8H5
ASBUDYkuBcPjUAPK7J/3KtGLT5Sx9p2U3BuYmm7v/FayIQf66KH19pK8GZY9Ycp
Y1MdenHzAcA4N/aBFOVTL0yMoFbW1g4LQ4AV9r4eGJfAGqtLEKX4r1bnFOQ04y
DrmgRT3fqAWYWIpiVuRVkpb2vNanw2u5IQZXLm6IEH0Jt+CI8XVL5z7xi1Bp5T
Kte7Q+FkF8gGdKCAQEAohqoVI7cnzgumLb91P/nwLnWwi8QGKWiKK2CkDGBpd
xzshVkhNZ+urWdnNqmfF0Y1BbLhAhZRLGuq9oRrmXNPuyPqfUF+AjjfUYEu02vcn
b1JaxjVxaUJ20vRP8u1XhcJD+xpORT6bGkv0tKTYRZ30Zb0WZgRjG6N908nerOAY
q1LHfiGED1hz2S7P1yZX6L3T6v+ezzkHfW/QoIUW6RfqU11g65VMrr18K0R6fh5
8Rs8Q0G2Avun0Vv6ApteNACSd78IBsN4o/tPD+DgTa8YVDvVb1YLzmMhuLc62C
r1Ht2b32xpJcViqmLTBUqNKfss2Hn6oswL0m0TIIQKCAQEAmm0y4kohM48g1mGi
PcP2o87IknDrUwhj0K7+PCnjilQ8fYLvyEYZHy6AyWYkSWHCTN/OVzVriREEW4
2JQduSWToIB02M/UEIujIQIoeZ0oJbTTpJViZZTNRQ0IPf7e2HyRrRG8trg+juc6
zSxz21S2tSRL5UYCLBUVYwdtA9oXNuNMkMeyIjJceSMqPWPMS1QwDCayns5Zi+oCk
JuxIphEBjLBYMY7XjW8XG/9FLynB8/t5NMrrjzNUsmn4E+nhUBfnSHWZnNG90M65I
oCTEvKsNZthrdCn3yV1WGcEcM1MvNI+7s0JVTcm9dUEpS0c74Pk19yVv+XGScP1
At/xNQKCAQEA3JrVPONh7zofjyXDUUgFRaxrJqpWAO8vBiNG5k0BP9zBX24/bJm5
qbJk0jvKxgIn6728mb2ieeLBN8NOHrIGqvD7ewEvqoT4Wo1oMtdCN7o0uG2Tg0g
16uEuTB7hJPb+D6LsgP8kEZMzc3yf10iFipnaTbrbD9pgF4gag4ohCbqmlpc2MaT
iHLHhZUF4BAMeTrYqWHanX62w77rZrQzFJw0Zca9ZOIFcbf0cfDK0XWD/qZUvEnn
wxvncWZUkHmAtB0vLdkPASK+nWYTX+sj6IIG94RUx8/rE0VzILz13V94kbHWFm
/LXqmCeEDp394Wk02MPHxjgbDQUJGXsQTQ=
-----END PRIVATE KEY-----

```

- Now select Option “[8] Reboot” on Main menu to reboot Accelerator and then select “y” to reboot Accelerator, in order to apply above certificate and Private Key.

```
=====
OnPrem Virtual Machine Setup Wizard
[Version: 5.8]
=====

Select from below menu:

[1] Edit network settings
[2] View registration status
[3] Change password
[4] SSL settings
[5] Proxy Settings
[6] NTP settings
[7] Uninstall the configuration
[8] Reboot
[9] Custom SSL Proxy Settings

Enter your choice:
8
Are you sure you want to reboot? Please type (y/n): y █
```

7. After reboot, attendees can stream Accelerator node using HTML5 player.



**Note:**

- Make sure all the Attendees should have Enterprise Root CA (from which Certificate is issued to Accelerator Node) on their system before streaming Primetime Event via Accelerator node using HTML5 Player.
  - Firefox browser does not use system trust store, therefore Enterprise root CA should be manually imported into browser trust store.
-

## 8.5 Simplified Certificate Provisioning

---

Once the feature for simplified provisioning is enabled and an Accelerator node is booted, BlueJeans Cloud Service generates a CA authorized certificate, manages its lifecycle for you and takes care of the renewal process.



**NOTE:** Please contact BlueJeans Customer Support in order to enable Simplified Provisioning for Accelerator nodes.

---

### 8.5.1 Benefits of Simplified Provisioning

---

Enterprise Admins do not need to maintain a fully managed PKI anymore. It eliminates the efforts of generating the self-signed certificate and key, copying them to the Accelerator Node and also expels the worrying about expiration of it. As this will not be a self-signed certificate, Attendees won't be asked to accept the certificate to proceed further.



**NOTE:** Please make sure that you have Latest OVF (Accelerator Software: BlueJeans\_Accelerator\_V2.9 or above).

---

## 9 Annexures

- Annexures 1: Generate Self-signed Certificate

### 9.1 Annexure 1: Generate self-signed certificate

---

This section will help you to generate self-signed certificate and private key for Accelerator.

Self-signed certificates that will be installed on Accelerator nodes, can generated using BlueJeans scripts which can be downloaded from [here](#).

Prerequisite: Linux server with latest version of openssl installed.

#### 9.1.1 Steps to Generate Certificate

---

Please refer below steps to generate certificate and private key of Accelerator:

1. Download file <cert\_scripts.tar.gz> from [here](#) on linux machine.
2. Untar the downloaded file using cli command : `tar -xvzf cert_scripts.tar.gz`
3. Go to the folder “cert\_scripts” using cli command: `cd cert_scripts/`
4. Generate Root CA :
  - a. Using vi editor, modify file “rootCA.cnf” and change following entries:
    - countryName
    - stateOrProvinceName
    - localityName
    - 0.organizationName
    - organizationalUnitName
    - commonName
    - emailAddress
  - (Note: Currently default settings are according to BlueJeans)
  - b. Give execute permission to the file “createRootCA.sh” and execute it using following cli commands:
    - `chmod +x createRootCA.sh`
    - `./createRootCA.sh`

- c. During execution of file, follow onscreen instructions. Here, you will be asked for passphrase. Please provide a strong passphrase. (Note: Remember it for later use as mention in section 6.c).
  - d. This execution will generate two files:
    - i. rootCA.key : needs to be kept secretly (never compromised)
    - ii. rootCA.pem: must be distributed internally to all streaming endpoints (user systems like desktops/laptops which will receive Primetime Event stream via Accelerator)
5. Generate Accelerator certificate:
- a. Using vi editor, modify file "server.csr.cnf" and change following entries:
    - i. countryName
    - ii. stateOrProvinceName
    - iii. localityName
    - iv. 0.organizationName
    - v. organizationalUnitName
    - vi. commonName (Note: Do not edit it.)
    - vii. emailAddress(Note: Currently default settings are according to BlueJeans.)
  - b. Give execute permission to the file "createselfsignedcertificate.sh" and execute it using following cli commands:
    - i. `chmod +x ./createselfsignedcertificate.sh`
    - ii. `./createselfsignedcertificate.sh <Accelerator IP>`  
(Example: `./createselfsignedcertificate.sh 192.168.1.10`)  
(Note: It's must to use only Accelerator Private IP here.)
  - c. During execution of file, follow onscreen instructions. When asked for passphrase for rootCA, enter the passphrase that was entered previously (in above step 4.c).
  - d. This execution will generate two files:
    - i. server\_<IP>.crt (certificate)
    - ii. server\_<IP>.key (private key)

Once you generate Certificate and Private Key for Accelerator, then import them on respective Accelerators. Please refer [Chapter 8.4](#).