

通过 Expressway 配置多个 CMS WebBridge

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简介

本文档介绍通过适用于 WebRTC 的 Expressway 配置、验证思科 Meeting Server (CMS) 的多个 Webbridge (WB) 以及对其进行故障排除的步骤。

先决条件

要求

Cisco 建议您了解以下主题：

- Expressway X8.11 及更高版本
- CMS 服务器 2.3 及更高版本
- 网络地址转换 (NAT)
- 围绕 NAT 使用中继遍历 (TURN)
- NAT 会话遍历实用工具 (STUN)
- 域名系统 (DNS)

配置前提条件：

- 如需参阅通过 Expressway 配置单一 WB 代理的指南，请[点击此处](#)
- 所有 CMS 节点的数据库集群 ([点击此处获取配置指南](#))
- 在 CMS 上配置并启用 WB、可扩展消息传送和网真协议 (XMPP) 以及 CallBridge (CB) ([点击此处获取配置指南](#))
- CB 节点集群 ([点击此处获取配置指南](#))

使用的组件

- Expressway X8.11
- CMS 2.3.4 (3 个节点)

本文档中的信息都是基于特定实验室环境中的设备编写的。如果设置处于活动状态，请确保您了解

任何命令或配置更改的潜在影响。

背景信息

Expressway 自版本 X8.11 开始添加了通过 Expressway 为具有多个 WB 的 WebRTC 代理提供支持的功能，以帮助实现 WB 的冗余和负载均衡。

X8.11 之前的版本仅支持负载均衡，如果 Expressway 选择的 WB 关闭，则连接会失败。

Expressway-C 利用访客账户客户端 URI 查询 DNS 来发现 WB IP 地址，从 X8.11 版本开始，再利用轮询机制将 WebRTC 连接均匀分布到这些 WB 中。

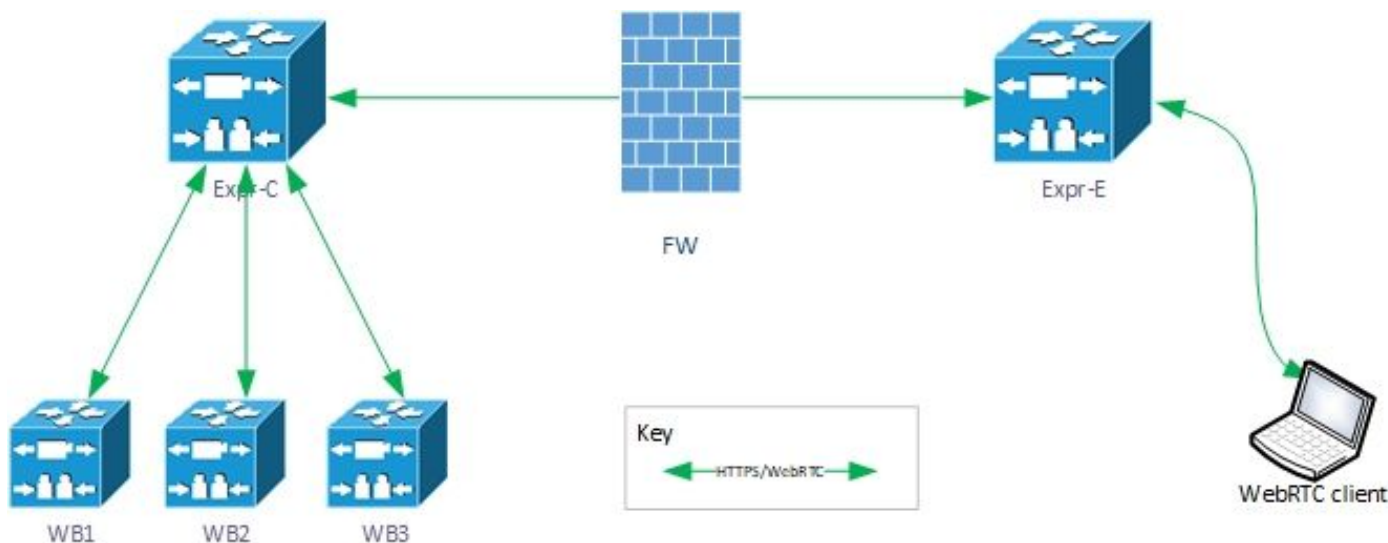
Expressway C 现在利用以下流程维护它获知的 WB 的 IP 地址动态列表。

- 利用访客账户客户端 URI 查询 DSN (每隔大约 60 分钟)，以便检测您部署的任何有意更改；例如，向服务 (SRV) 记录中添加或从中删除主机地址
- 然后，探测 DNS 返回的主机地址，看看是否可以接通以及是否是 WB (利用 API 调用)
- 如果地址无法连接，或者主机不是 WB，则 Expressway-C 会停止向该地址发送 WebRTC 连接，并且此类地址会在 Expressway-C 的 CMS 页面上标记为**失败状态**

注意：本文档重点介绍到 Expressway 上的多 WB 集成，而不是 WebRTC 代理的完整配置，这一内容可参见“配置前提条件”的第一条所述的指南。

配置

网络图



配置

1.为访客帐户客户端URI解析到的每个WB节点配置以下DNS SRV记录：

在本示例中，配置了以下记录：

访客账户客户端 URI：joinext.vngtp.cms

WB1 FQDN：cmsvngtp.vngtp.cms

WB2 FQDN：cms2.vngtp.cms

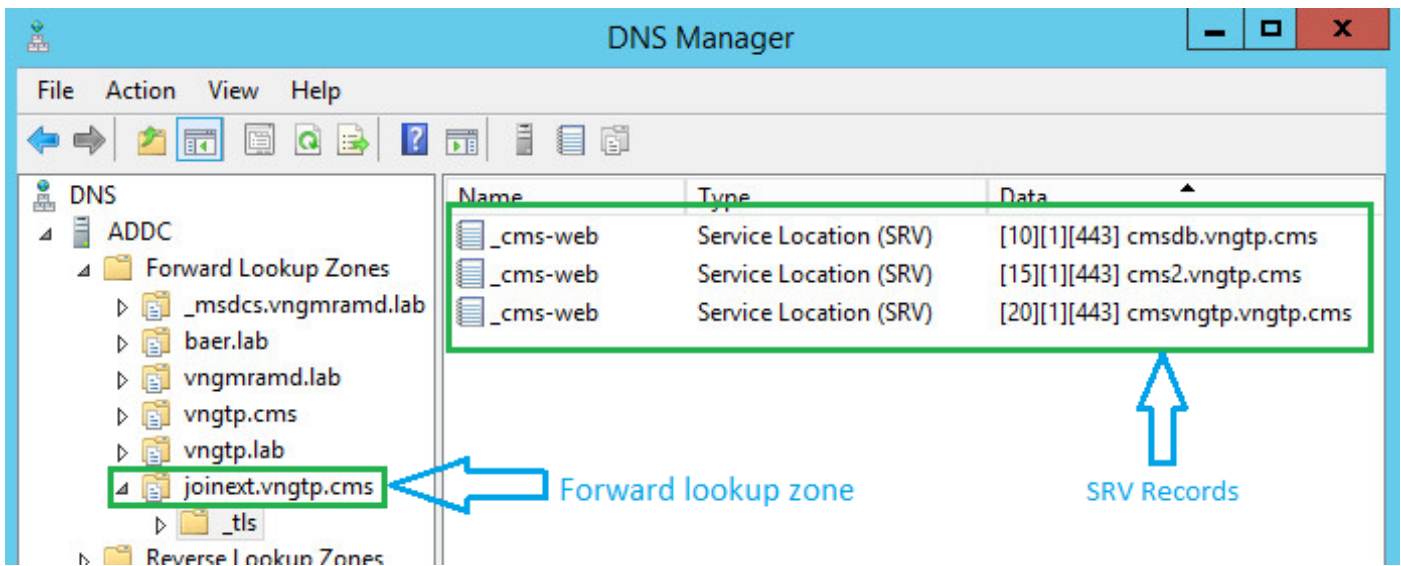
WB3 FQDN：cmsdb.vngtp.cms

注意：以下假设cmsdb.vngtp.cms的容量比其他呼叫网桥的容量大，因此优先级较低，允许更多连接从Expressway-C到达。

每个主机的完全限定域名 (FQDN) 配置有以下 DNS SRV 记录：

SRV 记录	端口	优先级	权重	解析结果
_cms-web._tls.joinext.vngtp.cms	443	20	1	cmsvngtp.vngtp.cms
_cms-web._tls.joinext.vngtp.cms	443	15	1	cms2.vngtp.cms
_cms-web._tls.joinext.vngtp.cms	443	10	1	cmsdb.vngtp.cms

DNS 服务器的示例：



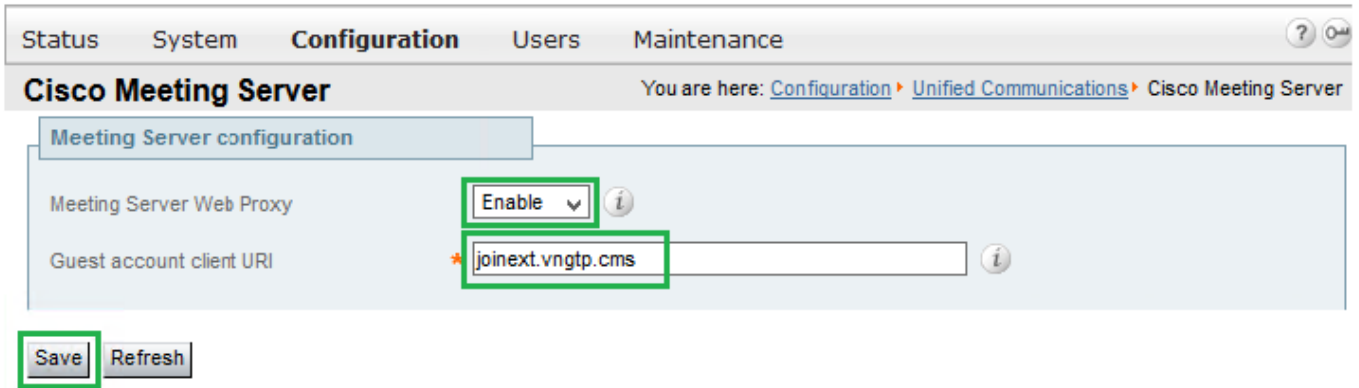
注意：要允许通过Expressway实现WebRTC连接的更好负载均衡（假设所有服务器具有相同的容量），请确保上述所有SRV记录的优先级和权重相同，请参阅以下示例：

SRV 记录	端口	优先级	权重	解析结果
_cms-web._tls.joinext.vngtp.cms	443	0	0	cmsvngtp.vngtp.cms
_cms-web._tls.joinext.vngtp.cms	443	0	0	cms2.vngtp.cms
_cms-web._tls.joinext.vngtp.cms	443	0	0	cmsdb.vngtp.cms

2.使用外部FQDN将WB集成到Expressway-C (供外部方使用) :

- 导航至配置 > 统一通信 > 思科 Meeting Server
- 在访客账户客户端 URI 中输入 FQDN
- 然后选择保存

下图中显示了一个示例 :



验证

使用本部分可确认配置能否正常运行。

请进行检查，确保 Expressway-C 能够连接到 FQDN 解析的所有 WB。

导航至配置 > 统一通信 > 思科 Meeting Server。

当 Expressway-C 能够连接 WB 后，状态将是活动，如下图所示：

Guest account client URI resolved to the following targets				
Name	Address	Priority	Weight	Status
joinext.vngtp.cms	192.168.1.66	20	1	Active
joinext.vngtp.cms	192.168.1.211	15	1	Active
joinext.vngtp.cms	192.168.1.212	10	1	Active

以下日志显示将 WB 添加到 Expressway-C 后出现的结果：

a.Expressway-C 在其数据库上为 Webbridge FQDN 创建了一个对象 UUID，用于执行命令：

```
2018-07-09T14:09:10.773+02:00 vcsc httpd[8724]: web: Event="System Configuration Changed"
Detail="commands/cmsadd/uuid - created with value: 'd86cf754-dc5c-438f-900f-51e5c702b94e'" Src-
ip="192.168.1.5" Src-port="51223" User="admin" Level="1" UTCTime="2018-07-09 12:09:10"
2018-07-09T14:09:10.773+02:00 vcsc httpd[8724]: web: Event="System Configuration Changed"
Detail="commands/cmsadd/time_started - created with value: '0'" Src-ip="192.168.1.5" Src-
port="51223" User="admin" Level="1" UTCTime="2018-07-09 12:09:10"
2018-07-09T14:09:10.773+02:00 vcsc httpd[8724]: web: Event="System Configuration Changed"
Detail="commands/cmsadd/time_finished - created with value: '0'" Src-ip="192.168.1.5" Src-
port="51223" User="admin" Level="1" UTCTime="2018-07-09 12:09:10"
2018-07-09T14:09:10.773+02:00 vcsc httpd[8724]: web: Event="System Configuration Changed"
Detail="commands/cmsadd/command_state - created with value: 'queued'" Src-ip="192.168.1.5" Src-
```

port="51223" User="admin" Level="1" UTCTime="2018-07-09 12:09:10"
2018-07-09T14:09:10.773+02:00 vcsc httpd[8724]: web: Event="System Configuration Changed"
Detail="commands/**cmsadd**/command_error - created with value: ''" Src-ip="192.168.1.5" Src-
port="51223" User="admin" Level="1" UTCTime="2018-07-09 12:09:10"
2018-07-09T14:09:10.773+02:00 vcsc httpd[8724]: web: Event="System Configuration Changed"
Detail="commands/**cmsadd**/name - created with value: '**joinext.vngtp.cms**'" Src-ip="192.168.1.5"
Src-port="51223" User="admin" Level="1" UTCTime="2018-07-09 12:09:10"

**b.查询 DNS 的 SRV 记录 _cms-web._tls.<WB_FQDN> , 在此示例中为 _cms
web._tls.joinext.vngtp.cms:**

2052018-07-09 12:09:11.029192.168.1.64192.168.1.61DNS91Standard query 0xfb10 SRV **_cms-
web._tls.joinext.vngtp.cms**
2062018-07-09 12:09:11.032192.168.1.61192.168.1.64DNS246Standard query response 0xfb10 SRV **_cms-
web._tls.joinext.vngtp.cms** SRV 15 1 443 cms2.vngtp.cms SRV 20 1 443 cmsvngtp.vngtp.cms SRV 10 1
443 cmsdb.vngtp.cms A 192.168.1.211 A 192.168.1.66 A 192.168.1.212

c.在其数据库中为每个WB创建与用于集成这些WB的外部连接URI相关的单独条目 :

2018-07-09T14:09:11.187+02:00 vcsc UTCTime="2018-07-09 12:09:11,187" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid cb7d5de8-1ab3-4a0d-a52a-8dbc885effeb name: joinext.vngtp.cms name:
joinext.vngtp.cms"
2018-07-09T14:09:11.187+02:00 vcsc UTCTime="2018-07-09 12:09:11,187" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid cb7d5de8-1ab3-4a0d-a52a-8dbc885effeb name: joinext.vngtp.cms guid:
81db7b67-2aa9-4f64-8d74-04c4037397a8"
2018-07-09T14:09:11.187+02:00 vcsc UTCTime="2018-07-09 12:09:11,187" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid cb7d5de8-1ab3-4a0d-a52a-8dbc885effeb name: joinext.vngtp.cms
dnsname: **cms2.vngtp.cms**"
2018-07-09T14:09:11.187+02:00 vcsc UTCTime="2018-07-09 12:09:11,187" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid cb7d5de8-1ab3-4a0d-a52a-8dbc885effeb name: joinext.vngtp.cms
address: **192.168.1.211**"
2018-07-09T14:09:11.187+02:00 vcsc UTCTime="2018-07-09 12:09:11,187" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid cb7d5de8-1ab3-4a0d-a52a-8dbc885effeb name: joinext.vngtp.cms
priority: 15"
2018-07-09T14:09:11.187+02:00 vcsc UTCTime="2018-07-09 12:09:11,187" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid cb7d5de8-1ab3-4a0d-a52a-8dbc885effeb name: joinext.vngtp.cms weight:
1"
2018-07-09T14:09:11.187+02:00 vcsc UTCTime="2018-07-09 12:09:11,187" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid cb7d5de8-1ab3-4a0d-a52a-8dbc885effeb name: joinext.vngtp.cms port:
443"

2018-07-09T14:09:11.193+02:00 vcsc UTCTime="2018-07-09 12:09:11,193" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 0408bdd0-9ada-45a0-834d-ccda166e8006 name: joinext.vngtp.cms name:
joinext.vngtp.cms"
2018-07-09T14:09:11.193+02:00 vcsc UTCTime="2018-07-09 12:09:11,193" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 0408bdd0-9ada-45a0-834d-ccda166e8006 name: joinext.vngtp.cms guid:
97d8fa86-7de4-4410-9767-7bc8b1eeaced"
2018-07-09T14:09:11.193+02:00 vcsc UTCTime="2018-07-09 12:09:11,193" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 0408bdd0-9ada-45a0-834d-ccda166e8006 name: joinext.vngtp.cms
dnsname: **cmsvngtp.vngtp.cms**"
2018-07-09T14:09:11.193+02:00 vcsc UTCTime="2018-07-09 12:09:11,193" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration

```

edgeCmsServerAddresses uuid 0408bdd0-9ada-45a0-834d-ccda166e8006 name: joinext.vngtp.cms
address: 192.168.1.66"
2018-07-09T14:09:11.193+02:00 vcsc UTCTime="2018-07-09 12:09:11,193" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 0408bdd0-9ada-45a0-834d-ccda166e8006 name: joinext.vngtp.cms
priority: 20"
2018-07-09T14:09:11.193+02:00 vcsc UTCTime="2018-07-09 12:09:11,193" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 0408bdd0-9ada-45a0-834d-ccda166e8006 name: joinext.vngtp.cms weight:
1"
2018-07-09T14:09:11.193+02:00 vcsc UTCTime="2018-07-09 12:09:11,193" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 0408bdd0-9ada-45a0-834d-ccda166e8006 name: joinext.vngtp.cms port:
443"

2018-07-09T14:09:11.206+02:00 vcsc UTCTime="2018-07-09 12:09:11,206" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid b151839e-a0dd-4176-bbed-ad28e05e9283 name: joinext.vngtp.cms name:
joinext.vngtp.cms"
2018-07-09T14:09:11.206+02:00 vcsc UTCTime="2018-07-09 12:09:11,206" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid b151839e-a0dd-4176-bbed-ad28e05e9283 name: joinext.vngtp.cms guid:
9c788380-6601-4dba-96e0-739511728369"
2018-07-09T14:09:11.206+02:00 vcsc UTCTime="2018-07-09 12:09:11,206" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid b151839e-a0dd-4176-bbed-ad28e05e9283 name: joinext.vngtp.cms
dnsname: cmsdb.vngtp.cms"
2018-07-09T14:09:11.206+02:00 vcsc UTCTime="2018-07-09 12:09:11,206" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid b151839e-a0dd-4176-bbed-ad28e05e9283 name: joinext.vngtp.cms
address: 192.168.1.212"
2018-07-09T14:09:11.206+02:00 vcsc UTCTime="2018-07-09 12:09:11,206" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid b151839e-a0dd-4176-bbed-ad28e05e9283 name: joinext.vngtp.cms
priority: 10"
2018-07-09T14:09:11.206+02:00 vcsc UTCTime="2018-07-09 12:09:11,206" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid b151839e-a0dd-4176-bbed-ad28e05e9283 name: joinext.vngtp.cms weight:
1"
2018-07-09T14:09:11.206+02:00 vcsc UTCTime="2018-07-09 12:09:11,206" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid b151839e-a0dd-4176-bbed-ad28e05e9283 name: joinext.vngtp.cms port:
443"

```

d.Expressway-C在HTTP允许列表中为HTTPS和WebSocket流量创建常规访问规则 WB通用路径的自动入站规则：

Type	Protocol	Ports	Match type	Path	Methods
Meeting Server web bridges	https	443	Prefix	/	GET, POST, PUT, HEAD, DELETE
Meeting Server web bridges	wss	443	Prefix	/	GET, POST, PUT, HEAD, DELETE

故障排除

本部分提供了可用于对配置进行故障排除的信息。

以下是将 WB 集成到 Expressway 上之后出现的一些典型问题：

1.在Expressway-C的CMS页面上看不到优先级和权重，如图所示：

Cisco Meeting Server You are here: [Configuration](#) > [Unified Communications](#) > Cisco Meeting Server

Meeting Server configuration

Meeting Server Web Proxy Enable ▼ ⓘ

Guest account client URI * ⓘ

Guest account client URI resolved to the following targets

Name	Address	Priority	Weight	Status
joinext.vngtp.cms	192.168.1.66	-	-	Active
joinext.vngtp.cms	192.168.1.211	-	-	Active
joinext.vngtp.cms	192.168.1.212	-	-	Active

所需的日志：

- 来自 Expressway-C 的包含 tcpdump 的诊断日志 导航到 **维护 > 诊断 > 诊断日志记录** 确保选中 **记录时包含 tcpdump**，然后选择开始新日志

要在日志中查找的内容：

a.在诊断日志中：

- 利用文本编辑器（例如 Notepad++）打开诊断日志，然后利用在当前文档中查找全部 选项搜索加入 URL
- 您将在日志中看到，Expressway-C 未利用其实际 FQDN 创建单独的 WB UUID，而是利用常规加入 URL 执行这一操作，如以下日志片段所示：

```
2018-07-13T14:44:21.688+02:00 vcsc UTCTime="2018-07-13 12:44:21,688" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0ab708c9-4ce1-47b3-9bb6-2964baf39bb3 name: joinext.vngtp.cms guid: 97d8fa86-7de4-4410-9767-7bc8b1eeaced"
2018-07-13T14:44:21.688+02:00 vcsc UTCTime="2018-07-13 12:44:21,688" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0ab708c9-4ce1-47b3-9bb6-2964baf39bb3 name: joinext.vngtp.cms dnsname: joinext.vngtp.cms"
2018-07-13T14:44:21.688+02:00 vcsc UTCTime="2018-07-13 12:44:21,688" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0ab708c9-4ce1-47b3-9bb6-2964baf39bb3 name: joinext.vngtp.cms address: 192.168.1.66"
2018-07-13T14:44:21.688+02:00 vcsc UTCTime="2018-07-13 12:44:21,688" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0ab708c9-4ce1-47b3-9bb6-2964baf39bb3 name: joinext.vngtp.cms priority: 65536"
2018-07-13T14:44:21.688+02:00 vcsc UTCTime="2018-07-13 12:44:21,688" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0ab708c9-4ce1-47b3-9bb6-2964baf39bb3 name: joinext.vngtp.cms weight: 0"
2018-07-13T14:44:21.688+02:00 vcsc UTCTime="2018-07-13 12:44:21,688" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 0ab708c9-4ce1-47b3-9bb6-2964baf39bb3 name: joinext.vngtp.cms port: 443"
2018-07-13T14:44:21.702+02:00 vcsc UTCTime="2018-07-13 12:44:21,702" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration edgeCmsServerAddresses uuid 4b1b99fb-1b8f-400e-b066-d8906ffcd6fc name: joinext.vngtp.cms name: joinext.vngtp.cms"
2018-07-13T14:44:21.702+02:00 vcsc UTCTime="2018-07-13 12:44:21,702" Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>"
```

```

Detail="xconfiguration edgeCmsServerAddresses uuid 4b1b99fb-1b8f-400e-b066-d8906ffcd6fc name:
joinext.vngtp.cms guid: 81db7b67-2aa9-4f64-8d74-04c4037397a8"
2018-07-13T14:44:21.702+02:00 vcsc UTCTime="2018-07-13 12:44:21,702" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 4b1b99fb-1b8f-400e-b066-d8906ffcd6fc name: joinext.vngtp.cms
dnsname: joinext.vngtp.cms"
2018-07-13T14:44:21.702+02:00 vcsc UTCTime="2018-07-13 12:44:21,702" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 4b1b99fb-1b8f-400e-b066-d8906ffcd6fc name: joinext.vngtp.cms
address: 192.168.1.211"
2018-07-13T14:44:21.702+02:00 vcsc UTCTime="2018-07-13 12:44:21,702" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 4b1b99fb-1b8f-400e-b066-d8906ffcd6fc name: joinext.vngtp.cms
priority: 65536"
2018-07-13T14:44:21.702+02:00 vcsc UTCTime="2018-07-13 12:44:21,702" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 4b1b99fb-1b8f-400e-b066-d8906ffcd6fc name: joinext.vngtp.cms weight:
0"
2018-07-13T14:44:21.702+02:00 vcsc UTCTime="2018-07-13 12:44:21,702" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 4b1b99fb-1b8f-400e-b066-d8906ffcd6fc name: joinext.vngtp.cms port:
443"
2018-07-13T14:44:21.706+02:00 vcsc UTCTime="2018-07-13 12:44:21,706" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 6cc95c70-0636-4190-85f2-333b86b29c91 name: joinext.vngtp.cms name:
joinext.vngtp.cms" 2018-07-13T14:44:21.706+02:00 vcsc UTCTime="2018-07-13 12:44:21,706"
Event="System Configuration Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>"
Detail="xconfiguration edgeCmsServerAddresses uuid 6cc95c70-0636-4190-85f2-333b86b29c91 name:
joinext.vngtp.cms guid: 9c788380-6601-4dba-96e0-739511728369"
2018-07-13T14:44:21.706+02:00 vcsc UTCTime="2018-07-13 12:44:21,706" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 6cc95c70-0636-4190-85f2-333b86b29c91 name: joinext.vngtp.cms
dnsname: joinext.vngtp.cms"
2018-07-13T14:44:21.706+02:00 vcsc UTCTime="2018-07-13 12:44:21,706" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 6cc95c70-0636-4190-85f2-333b86b29c91 name: joinext.vngtp.cms
address: 192.168.1.212"
2018-07-13T14:44:21.706+02:00 vcsc UTCTime="2018-07-13 12:44:21,706" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 6cc95c70-0636-4190-85f2-333b86b29c91 name: joinext.vngtp.cms
priority: 65536"
2018-07-13T14:44:21.706+02:00 vcsc UTCTime="2018-07-13 12:44:21,706" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 6cc95c70-0636-4190-85f2-333b86b29c91 name: joinext.vngtp.cms weight:
0"
2018-07-13T14:44:21.706+02:00 vcsc UTCTime="2018-07-13 12:44:21,706" Event="System Configuration
Changed" Node="clusterdb@127.0.0.1" PID="<0.488.0>" Detail="xconfiguration
edgeCmsServerAddresses uuid 6cc95c70-0636-4190-85f2-333b86b29c91 name: joinext.vngtp.cms port:
443"

```

b.在数据包捕获中：

- 利用字符串 **DNS** 进行过滤
- 您将在结果中看到，SRV 记录的 DNS 查询失败，如下图所示：

The screenshot shows a Wireshark capture of network traffic. The filter is set to 'dns'. The packet list pane shows several DNS packets. Packet 167 is highlighted with a red box, showing a failed SRV query for 'joinext.vngtp.cms'.

No.	Time	Source	Destination	Protocol	Length	Info
15	2018-07-13 12:44:07.963	192.168.1.64	192.168.1.61	DNS	74	Standard query 0x00a6 AAAA vcse.vngtp.lab
16	2018-07-13 12:44:07.963	192.168.1.61	192.168.1.64	DNS	135	Standard query response 0x00a6 AAAA vcse.vngtp.lab SOA addc.vngmramd.lab
112	2018-07-13 12:44:11.619	192.168.1.64	192.168.1.61	DNS	85	Standard query 0x13ea PTR 200.36.48.10.in-addr.arpa
130	2018-07-13 12:44:12.927	192.168.1.61	192.168.1.64	DNS	85	Standard query response 0x13ea Server failure PTR 200.36.48.10.in-addr.arpa
162	2018-07-13 12:44:17.931	192.168.1.64	192.168.1.61	DNS	85	Standard query 0xc823 PTR 200.36.48.10.in-addr.arpa
167	2018-07-13 12:44:21.568	192.168.1.64	192.168.1.61	DNS	91	Standard query 0xd373 SRV _cms-web._tls.joinext.vngtp.cms
168	2018-07-13 12:44:21.568	192.168.1.61	192.168.1.64	DNS	172	Standard query response 0xd373 No such name SRV _cms-web._tls.joinext.vngtp.cms SOA addc.vngmramd.lab
169	2018-07-13 12:44:21.569	192.168.1.64	192.168.1.61	DNS	104	Standard query 0x9792 SRV _cms-web._tls.joinext.vngtp.cms.vngmramd.lab

解决方案：

检查并确保 Expressway-C 使用的 DNS 服务器满足以下要求：

- 正向查找区域 (FLZ) 具有访客账户客户端 URI，不仅仅是 URI 中的域
- 确保此 FLZ 中配置了 SRV 记录 (`_cms-web._tls.<WB_FQDN>`)，并且包含相关的优先级和权重

2.使用外部连接URL添加集群后，一个或多个WB处于活动状态，如下图所示：

Guest account client URI resolved to the following targets				
Name	Address	Priority	Weight	Status
joinext.vngtp.cms	192.168.1.211	15	1	Active
joinext.vngtp.cms	192.168.1.212	20	1	Failed
joinext.vngtp.cms	192.168.1.66	10	1	Active

所需的日志：

- 来自 Expressway-C 的包含 tcpdump 的诊断日志
- 利用命令行界面 (CLI) 上的 `pcap <interface>` 命令后，服务器的数据包捕获显示失败状态（其中该接口正在侦听 WB 的接口）

要在日志中查找的内容：

a.诊断日志：

- 利用失败 WB 的 IP 地址在当前文档中查找全部
- 此处的错误在日志中如下显示：

```
Detail="CMS check failed" Address="192.168.1.212", Error="[Errno 111] Connection refused"
```

b.在数据包捕获中：

- 利用字符串 `ip.addr==<IP address of the failed WB>` 过滤数据包捕获
- 您将看到 Expressway-C 向 WB 发送的 TCP SYN 消息，在这种情况下，未收到任何 SYN-ACK 或 ACK，如此图所示：

The screenshot shows a Wireshark capture of network traffic on the interface eth0. The filter is set to `ip.addr==192.168.1.212`. The capture shows several TCP packets:

No.	Time	Source	Destination	Protocol	Length	Info
301	2018-07-13 13:10:01.011	192.168.1.64	192.168.1.212	TCP	74	31630 → 443 [SYN] Seq=0 Win=29200 Len=0 MSS=1460 SACK_PERM=1 TSval=2866356001
302	2018-07-13 13:10:01.011	192.168.1.212	192.168.1.64	TCP	60	443 → 31630 [RST, ACK] Seq=1 Ack=1 Win=0 Len=0
1675	2018-07-13 13:15:01.048	192.168.1.64	192.168.1.212	TCP	74	31778 → 443 [SYN] Seq=0 Win=29200 Len=0 MSS=1460 SACK_PERM=1 TSval=2866656029
1676	2018-07-13 13:15:01.049	192.168.1.212	192.168.1.64	TCP	60	443 → 31778 [RST, ACK] Seq=1 Ack=1 Win=0 Len=0

- WB pcap 将显示已收到这些 TCP SYN 消息，但未发送任何回复 (SYN-ACK 或 ACK)。

解决方案：

确保利用 CLI 上的 `webbridge enable` 命令在相应的 CMS 节点上启用 WB。