# Remote Application Server: Multiple Active Connection Brokers

- Parallels Remote Application Server 18.2
- Parallels Remote Application Server 18.3
- Parallels Remote Application Server 18.0
- Parallels Remote Application Server 18.1
- Parallels Remote Application Server 19.1
- Parallels Remote Application Server 19.0

RAS Connection Broker provides load balancing of published applications and desktops. A RAS Connection Broker (CB) is automatically installed when you install Parallels Remote Application Server. To ensure users do not experience any interruption of the service due to a failure of the RAS Connection Broker, additional Connection Brokers can be configured.

Multiple CBs can now be active for the same site. This will ensure that the load on the CBs will now be distributed equally.

***NOTE: We do not recommend utilizing more than 3 Connection Broker within the same environment as it will cause additional unnecessary traffic consumption. Up to 3 Connection Broker should be enough to handle large environment.***

# Adding a Connection Broker

To ensure users do not experience any interruption of the service due to a failure of the primary RAS Connection Broker and to distribute the load, an additional Connection Broker can be configured for each site in the Parallels Remote Application Server farm.

To add a RAS Connection Broker to a site:

1. In the RAS console, navigate to **Farm / / Connection Broker???????.**
2. In the **Tasks** drop-down menu, click **Add** to launch the Add RAS Connection Broker wizard.
3. Specify the **FDQN or IP address** of the server that will host the new Connection Broker.
4. Select the Install a gateway with a publishing agent option if you also want to install a RAS Secure Client Gateway on the specified server.
5. Select the **Add Firewall Rules** option to automatically configure the firewall on the server.
6. Click **Next**.
7. On the next page, click **Install** to install the RAS Connection Broker on the server. The Installing RAS Redundancy Service dialog opens.
8. Select the server on which the RAS Connection Broker is to be installed and click **Install**.
9. Click **Done**.
10. Click **OK** to add the server to the farm.

# Managing Connection Brokers

## Enabling or Disabling a Backup Connection Broker

To enable or disable a backup Connection Broker on a site, select it in the Connection Brokers list and then select or clear the check-box at the beginning of the row.

### Changing Backup Connection Broker Priority

Each RAS Connection Broker in the list is given a priority. By default, the local RAS Connection Broker is given the Master priority. To change the priority of other Connection Broker in the farm, select a Connection Broker and use the Move Up and Move Down buttons to move it up or down the list. The higher it is in the list, the higher priority it has.

## Promoting a Connection Broker to the Master Connection Broker

In case the primary Connection Broker cannot be recovered, you can promote a Connection Broker to Master as follows:

1. Open the Parallels Remote Application Server Console on the server that you would like to promote (all required files are automatically installed when a server is added as a backup Connection Broker server).
2. Select the **Farm** category and navigate to the **Connection Broker** node.
3. Select the RAS Connection Broker and then click **Promote Backup to Master** in the Tasks drop-down menu.
4. Click **OK** once the process is finished.

## Deleting a Backup Connection Broker

To delete a Connection Broker, select it in the list and then click Delete in the Tasks drop-down menu.

## Firewall Requirements

The ports below need not be enabled for access from the WAN or Internet since they are communication ports for Remote Application Server functions and modules:

- **TCP 20002** - Publishing Agent Service Port – Communications with SecureClientGateway and UI Console
- **TCP 20003** - Terminal Server Agent Port – Communications with Terminal Server agents
- **TCP 20001** - Connection Broker Service Port - Communication with other Connection Brokers
- **TCP 20030** - Communication between multiple Publishing Agents
- **Outbound TCP 443**- Communication with Parallels Licensing Server:
    - ras.parallels.com
    - account.parallels.com

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