

## Windows Enterprise OU Administrator Tips

# Remote Desktop Services in Windows Server 2008 R2

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### Introduction

The Remote Desktop Services (RDS) server role in Windows Server 2008 R2 includes improvements over previous versions of Terminal Services (TS) that improve and simplify licensing and operation in the IASTATE Windows domain. Proper configuration will allow departments to run Remote Desktop Session Host and Remote Desktop Licensing servers for their users, including both per-device and per-user client access licenses.

### Remote Desktop Roles

The primary components of any RDS environment are one or more Remote Desktop Session Host servers (RD Session Host), and one or more Remote Desktop Licensing (RD Licensing) servers. The licensing component may be collocated on an RD Session Host for small environments.

For RD Session Host farms the Remote Desktop Connection Broker (RD Connection Broker) can be added to provide session load balancing and reconnection.

### Remote Desktop Licensing Overview

Licensing discovery has been redesigned in Windows Server 2008 R2 Remote Desktop Services. Each RD Session Host server must be configured for one or more license servers explicitly. This can be done locally in the Remote Desktop Session Host Configuration tool or via group policy. The domain-based discovery model used by default with older versions of Terminal Services is no longer relevant.

On the RD Licensing server a local group is created called 'Terminal Server Computers'. In order to restrict which RD Session Host servers can be served by this RD Licensing server, add the computer accounts to this group. An empty 'Terminal Server Computers' group means the licensing server will issue licenses for any requesting RD Session Host server.

Per-device client access licenses (CALs) are tracked locally by the RD Licensing server. Per-user CALs, however, are not directly tracked. Rather, when a per-user CAL is issued the license information is stamped on the user's Active Directory account. Licensing compliance reports can then be run against

Active Directory from the RD Licensing Manager tool or using PowerShell. In order for the RD Licensing server to have the necessary permission to user objects the license server must be added to the 'Terminal Server License Servers' Active Directory group by a domain administrator. Without this permission per-user CALs will still be issued but errors will be logged on the license server and compliance reporting will be impossible.

The concept of sharing an RD Licensing server has come up from time to time. A University-wide license server hosted by ITS is not currently possible given the cost of purchasing sufficient CALs. Multiple departments could share a departmental license server, however there is no way to restrict one set of licenses to one set of users. Meaning if department A purchases 100 CALs and department B purchases 50 CALs, there is no way to prohibit either department from using only their purchased number of CALs.

### **Remote Desktop Licensing Installation and Activation**

High-level steps are summarized here. For more complete information refer to [Deploying Remote Desktop Licensing Step-by-Step Guide](#) on [TechNet](#).

1. Install Windows Server 2008 R2 as usual; join the new licensing server to the IASTATE domain.
2. Use Server Manager or PowerShell to add the Remote Desktop Services role with the Remote Desktop Licensing role service only.
3. Do not configure a discovery scope for the license server; complete the wizard.
4. Launch the Remote Desktop Licensing Manager.
5. Right-click the server name and choose Activate Server; complete the wizard.
6. Right-click the server name and choose Install Licenses; complete the wizard.
  - a. RDS CALs can be purchased through TechCYte.
7. Use Server Manager, PowerShell or net.exe to add the RD Session Host computer accounts to the local Terminal Server Computers group.
  - a. This ensures you only issue licenses to approved RD Session Host servers.
8. If you are using per-user CALs, send an email request to [its-ad-admins@iastate.edu](mailto:its-ad-admins@iastate.edu) asking for your new license server to be added to the Terminal Server License Servers group.

### **Remote Desktop Session Host Installation and Licensing Configuration**

Here again high-level steps are summarized only. For more complete information refer to [Installing Remote Desktop Session Host Step-by-Step Guide](#) on [TechNet](#).

1. Install Windows Server 2008 R2 as usual; join the new server to the IASTATE domain.
2. Use Server Manager or PowerShell to add the Remote Desktop Services role with the Remote Desktop Session Host role service only.
3. Complete the wizard and reboot when prompted.
4. Launch the Remote Desktop Session Host Configuration utility or use group policy to specify the Remote Desktop license server and related settings.