Virtual Server (Shared) has been cease sold and is no longer available for purchase.
WELCOME TO THE VIRTUAL SERVER (SHARED) USER GUIDE

AUSTRALIAN ACCOUNT HOLDERS

For sales, account set-up enquiries and technical support, contact your Telstra representative or visit the Cloud Services website (www.cloud.telstra.com), where you’ll find all our contact details plus a glossary, FAQs and Our Customer Terms.

TELSTRA GLOBAL ACCOUNT HOLDERS

For sales, account set-up enquiries and technical support, contact your Telstra Global representative or visit the Telstra Global website (www.telstraglobal.com/cloud) for the customer service team in your region.

Note: we don’t provide assistance with issues specific to a customer’s local network, servers, operating systems and software (post-installation). Specialist technical support may be charged as an additional service.

CONVENTIONS USED IN THIS GUIDE

The following typographical conventions are used in this guide for simplicity and readability:

Web addresses, email addresses and hyperlinks are shown in bold italics, for example www.cloud.telstra.com.

Button names and titles/features on your computer screen are shown in italics.

User input is shown in typewriter font.

Virtual Server (Shared) User Guide, Version 8.0

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# WHAT’S INSIDE

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In this guide, we explain how to create, modify and manage the virtual server (shared) compute service using the Cloud Services management console.

There are three different types of compute services available on cloud infrastructure. Choose the service based on the virtual server type you require – each differs according to the level of management you require for your virtual server resources.

Our cloud solutions allow you to use different server types in any combination. To learn about the other two types of virtual servers, see their separate user guides:

- **Virtual Server (Dedicated) User Guide**
- **Managed Virtual Server (Dedicated) User Guide**

Our virtual server user guides don’t include detailed information about account management, networks and security, infrastructure design and pricing. The following guides should be used in conjunction with this guide.

- **Account Management Guide**
- **Network and Security User Guide**
- **Infrastructure Design Guide**
- **Pricing Guide(s)**
- **Responsibilities Guide**
- **Our Customer Terms** (Australian customers only)
Our Cloud Services diagram below shows what’s covered in this guide, and where to go for further details.

**TELSTRA CLOUD INFRASTRUCTURE**
Virtual server (shared) uses a flexible portion of shared resources based in our cloud. Resources including CPU, RAM and storage are virtualised for your use, and scaled up or down to meet your needs.

All your virtual server (shared) cloud resources are drawn from our physical infrastructure. Our infrastructure capacity is shared across multiple customers using securely separated virtual resources.

Your resources are created and managed through the Cloud Services management console. You can choose to contain specific cloud resources (such as virtual servers, firewalls, load balancers and network connections) in specific virtual data centre locations.

You can use multiple virtual data centre locations in Australia or globally, and create multiple virtual data centres in the same location.

OUR INFRASTRUCTURE

Physical infrastructure used to deliver virtual server (shared) is simultaneously used by multiple customers. This infrastructure includes data centres and network components. Data centres securely house the physical resources used to provide your virtual servers.

Our network infrastructure includes features to ensure availability and security of your cloud resources and data. Read more about our infrastructure in the Network and Security User Guide.

RESOURCE SHARING

Virtual server (shared) resources aren’t dedicated to specific physical infrastructure. This allows you to quickly scale your resources up or down, to meet your business needs.

The shared environment means individual virtual servers won’t receive a predictable volume of resources such as physical CPU time, memory, networks and storage. At times, multiple customers may be contending for resource allocation from the same component of physical infrastructure. In these cases, our physical resource is shared evenly amongst all virtual servers allocated to it.

We manage the load on our physical infrastructure. You may experience variable performance from a virtual server if the physical infrastructure it’s allocated to is being over or under-utilised for a period of time. To avoid variable performance, you can choose virtual server (dedicated) resources, where all resources are assigned to specific physical blades.

THE CLOUD SERVICES MANAGEMENT CONSOLE

You can manage and configure your virtual server (shared) resources at any time, through our secure online management console at cloud.telstra.com/manage.

Instructions on how to use the Cloud Services management console form most of the content in this guide. For details about how to access the Cloud Services management console, see our Account Management Guide.

SERVICE PLANS

As part of purchasing a virtual server (shared) plan, you’ll receive a service that allows you to:

- Create virtual servers (shared)
- Add and configure virtual server resources
Our plans come in a range of sizes, including varying amounts of cloud resources. Compare the different plans available on our Cloud Services [website](#).

Learn more about managing plans and services in the *Account Management Guide*.

**VIRTUAL SERVER RESOURCES**

This section of the guide provides an introduction to the virtual server (shared) resources available on cloud infrastructure, and the parameters for their use.

You have control of your virtual server resources through the Cloud Services management console. Add, remove, configure, or scale your resources up or down as you need to.

A virtual server (shared) service allows you to create virtual servers of this type. Each service will allow you to create virtual servers within one virtual data centre location.

Virtual server (shared) can be deployed alongside our other types of virtual servers – virtual server (dedicated) and managed virtual server (dedicated) – in the same virtual data centre. There’s no limit to the number of virtual servers you can create, in either your public or private network.

All virtual server (shared) services have the following resources available:

- CPU and RAM
- Storage
- Operating system
- Applications
- Backup
- Snapshots
- Network resources

As part of your virtual server (shared) environment, we don’t support:

- Mounting of remote media to a virtual server
- Virtual server cloning

**NETWORK RESOURCES**

Network and security resources for your virtual server (shared) can be created and managed from within the Cloud Services management console, but are not detailed in this guide. Your use of network resources is calculated under your virtual data centre service.

Refer to the *Network and Security Guide* for information about:

- Virtual data centres
- Networks and network connections
- IPsec VPN
- Firewalls
- Load balancers
- SSL VPN
- SMTP mail relay
- Security add-ons
- VLAN Extension
Once you have purchased a plan, go to the Cloud Services management console to create your virtual servers.

Log in to the Cloud Services management console at cloud.telstra.com/manage.

For help with this, refer to the Account Management Guide.

BEFORE YOU CREATE A VIRTUAL SERVER

For security purposes, we suggest configuring a firewall in your public network before creating any virtual servers in your public network.

Instructions for adding and configuring firewall rules can be found in our Network and Security User Guide.

You may want to prepare a way to access a virtual server, before you create it.

Remote desktop software or Linux secure shell client are two of the possible ways to access your virtual servers.

Bear in mind, if you’re planning to use an SSL VPN, IPsec VPN, Telstra Next IP® network or Global IP VPN connection, it can take up to three business days to activate the connection to each virtual server.

CREATE VIRTUAL SERVERS

A virtual server (shared) service allows you to create virtual servers of this type at any time, in either your public or private network.

You can create virtual servers via the Servers page in the Cloud Services management console. Select Add Server then select whether you want to:

1) Add a virtual server with software OR
2) Add a virtual server
ADD A VIRTUAL SERVER WITH SOFTWARE

The Virtual server with software link takes you to a form where you can request a new virtual server(s) with the software you need. You’ll find the list of available software and installation requirements on this form plus the server configuration details and your choice of operating systems.

While it’s up to you to choose the right configurations for your business, if you need user sizing guidelines to help with your request for software on a new virtual server, see our software technical specifications.

Depending on the software you choose, the operating system options are:

- Windows Server 2008 R2 Enterprise (64-bit)
- Windows Server 2012 R1 Datacenter (64-bit)
- Windows Server 2012 R2 Datacenter (64-bit)

Also depending on the type of software you choose, you’ll need to provide some or all of the following configuration details:

- The number of virtual servers to install the software and/or its components onto
- The number of user licences
- Public or private network – if you select public network, you need to add the IP subnet and IP address
- Active Directory Domain Services domain name (for software that requires this, you’ll need to decide which domain you want your new server(s) joined to and ensure your Active Directory Domain Servers server is accessible from the network you request your virtual server(s) to be created on). You’ll also need to provide your domain administrator username and password (we recommend you change your password once your server(s) and its software are up and running).

Once you submit the form, we’ll install the software for you before handing control of your new virtual server(s) over to you. We do our best to install software on your new virtual server as quickly as we can, though due to the complexity it can take up to three business days.

Once you receive confirmation that your virtual server with software installation is complete you’ll need to:

- Create or configure firewall rules for the IP address(es) of the virtual server(s) we create for you
- Configure any virtual server backups, restores and snapshots you need
- Configure the software according to your business needs
Note: we do not provide any software support. You need to source any help you might need for set-up, configuration, usage, upgrades and ongoing management of the software.

Need to make any changes?
*Email us* if you want to change the number of users or CPU associated with your software.

Need to cancel your software?
Uninstall the software and *email us* when you’ve done so.

Want to remove a virtual server with software already installed on it?
Back up your data, delete the server and *email us*.
ADD A VIRTUAL SERVER

The Virtual server (shared) option takes you to the first of three steps in the virtual server configuration process:

- Configure a virtual server
- Choose a network
- Review

CONFIGURE A VIRTUAL SERVER

To configure a virtual server, you’ll need to:

- Specify a virtual server name
- Select an operating system
- Select a CPU and RAM combination
- Add virtual disks

Once a virtual server is active, you’ll be able to change your virtual server’s original configuration by:

- Resizing your system disk
- Increasing your virtual disk capacity

Later in this guide we describe other functionality you can configure, including:

- The power state of a virtual server
- Snapshots
- Backup settings
- Software installation

SPECIFY A VIRTUAL SERVER NAME AND DESCRIPTION

You’ll need to choose a name for the virtual server. Adding a description is optional.
SELECT AN OPERATING SYSTEM

All virtual servers must be configured using one of our pre-defined operating system templates.

<table>
<thead>
<tr>
<th>PLATFORM</th>
<th>VERSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Linux®</td>
<td>CentOS® 5.x (32/64-bit)</td>
</tr>
<tr>
<td></td>
<td>CentOS 6.x (32/64-bit)</td>
</tr>
<tr>
<td>Red Hat® Enterprise Linux</td>
<td>Red Hat Enterprise Linux 5.x (32/64-bit)</td>
</tr>
<tr>
<td></td>
<td>Red Hat Enterprise Linux 6.x (32/64-bit)</td>
</tr>
<tr>
<td>SUSE® Linux Enterprise</td>
<td>SUSE Enterprise Linux 10 (32/64-bit)</td>
</tr>
<tr>
<td></td>
<td>SUSE Enterprise Linux 11 (32/64-bit)</td>
</tr>
<tr>
<td>Microsoft Windows</td>
<td>Microsoft Windows Server 2003 - Enterprise R2 (32*/64-bit)</td>
</tr>
<tr>
<td></td>
<td>Microsoft Windows Server 2008 - Enterprise SP2 (32*/64-bit)</td>
</tr>
<tr>
<td></td>
<td>Microsoft Windows Server 2008 - Enterprise R2 (64-bit)</td>
</tr>
<tr>
<td></td>
<td>Microsoft Windows Server 2008 - Web R2 (64-bit)</td>
</tr>
<tr>
<td></td>
<td>Windows Server 2012 – Datacenter (64-bit)</td>
</tr>
<tr>
<td></td>
<td>Windows Server 2012 – Datacenter R2 (64-bit)</td>
</tr>
</tbody>
</table>

*Does not currently support virtual servers running 8CPUs.

The Pricing Guide for your virtual data centre location contains operating system pricing information.

Note: we don’t support customer-supplied operating systems. You must select from our pre-packaged operating systems. Once initially installed, we don’t monitor or install updates to your virtual server operating system – this is your responsibility.

Select a type of operating system and the version details will appear, along with fields to create a username and password for the operating system.

If you plan on connecting your virtual server to your public network, and your firewall allows RDP and/or SSH access, we recommend you create a sufficiently complex password.

If your virtual server is running Linux, this user has sudo privileges. If your virtual server is running Windows, this user is a member of the administrators group.

Use this username and password account to change the Windows operating system administrator password or the Linux root password through the virtual server’s operating system. We don’t keep a record of this password.
SELECT A COMBINATION OF CPU AND RAM

CPU and RAM for each virtual server are available in various set combinations. You can scale up to eight CPUs and 64GB RAM.

CPU and RAM combination options will appear.

Once you’ve set up your virtual server, you can change the CPU and RAM configuration via the Cloud Services management console’s Servers page.

CPU and RAM combinations include:

<table>
<thead>
<tr>
<th>RAM (GB)</th>
<th>1</th>
<th>2</th>
<th>4</th>
<th>8</th>
<th>16</th>
<th>32</th>
<th>64</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Available</td>
<td>Available</td>
<td>Available</td>
<td>Available</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Available</td>
<td>Available</td>
<td>Available</td>
<td>Available</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Available</td>
<td>Available</td>
<td>Available</td>
<td>Available</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>8</td>
<td>Available</td>
<td>Available</td>
<td>Available</td>
<td>Available</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ADD VIRTUAL DISKS

Virtual disks provide your data storage capacity and are allocated to an individual virtual server. Select the Add a virtual disk button to add rows for the number of disks you want to create. You can create up to five virtual disks per virtual server.

Choose a name for the virtual disk. Enter or select the disk space size – in multiples of 10GB, ranging from a minimum of 10GB to a maximum of 1TB per disk. Each virtual server can support a total of up to 2TB of data.

You can also add or remove virtual disks at any time via the Cloud Services management console’s Servers page.

CHOOSE A NETWORK

You can choose to locate a virtual server in either your:

- Public network
- Private network

If you haven’t previously configured a private network, you won’t be presented with a private network option.

If you’ve configured multiple subnets for your private network, select which IP subnet you want the virtual server to connect to.

Your choice of network will determine how you can initially communicate with the virtual server. Virtual servers in your public network are accessible through the internet via your public interconnect.

Virtual servers in your private network are only accessible through a private network connection, via your private interconnect. You can connect to your private network through a Telstra Next IP® network, Global IP VPN and/or an IPsec VPN tunnel.
After your virtual server has been created, you can choose to add a second network connection to a virtual server (dual homing), which would allow you to reach it via both the internet, and a private network connection.

A third connection point, a management IP address available on all virtual servers, enables you to access virtual servers through SSL VPN and other alternative methods.

See how to create a private network and manage network connections in our Network and Security User Guide.

**REVIEW AND SUBMIT**

You can review the configuration details before creating the virtual server.

Select *Edit* to change the server’s configuration details.

It takes us up to three business days to manually install software on your selected server(s). You won’t be able to access a new virtual server until any software you’ve selected is installed.
CHAPTER 4
MANAGE VIRTUAL SERVERS

This section of the guide explains how to view, manage and make changes to your virtual servers.

Most of the ways you can manage your virtual server (shared) are performed through the Cloud Services management console.

Outside of the Cloud Services management console, you can keep your operating systems up-to-date and install your own software.

Management functions for virtual server (shared) include:

- Group virtual servers
- View virtual server details
- Change a virtual server’s power state
- Change your virtual server’s name and description
- Change your virtual server’s CPU and RAM combination
- View software installations, manage licensing and user details
- Manage system disks and storage
- Delete a virtual server
- Create and restore from backups
- Create and restore from snapshots
- Monitor your resource usage
- View your activity log

There are additional management functions available through the Cloud Services management console, not detailed in this guide.

- View MAC and IP addresses for network connections – see our Network and Security User Guide
- Modify private network connections – see our Network and Security User Guide

USING THE CLOUD SERVICES MANAGEMENT CONSOLE

The management console allows you to manage your virtual servers through the Servers page, which includes a Details view.
THE SERVERS PAGE

The Servers page is located under Infrastructure in the Cloud Services management console.

You can use the Servers page to:

- Group your virtual servers
- Access your virtual servers
- Update virtual server details
- Delete virtual servers
- Manage storage and snapshots
GROUP YOUR VIRTUAL SERVERS

Groups allow you to organise your servers in any way you like (e.g. by function such as development, test or production).

You can create and manage your own groups via the Servers page under Infrastructure.

The group feature allows you to:

- Create a group
- Move servers to groups
- Rename a group
- Delete a group

CREATE A GROUP

Initially, all of your virtual servers can be found in Unnamed. From the Servers page, select Create group (folder icon with a plus symbol) to create a new group.

Enter a unique name (i.e. not the same as an existing group), then select Create group.

A new empty group is created – ready for you to move your servers into it.

MOVE SERVERS TO A GROUP

You can move individual or multiple servers to an existing group.

Individual servers

Select a server icon in any group, then hover over the arrow next to the name. Select Move to… from the menu to display the next Move server to group window (the Move link only displays if you’ve created at least one group).
Multiple servers

You can select multiple servers in list and grid view.

In grid view, select Move servers (the link only displays if you’ve created at least one group).

A tick box displays next to the server names. Select one for each server you want to move.

Select a group from the Move selected servers to menu, then click Move servers.

In list view, select the tick box next to each server you want to move.

Select the Move servers link.

RENAME A GROUP

Select Rename. Enter a new name for the group, then select Rename group.

DELETE A GROUP

Select Delete link. A message displays asking you to confirm that you want to delete the group. Servers in a deleted group are moved back to Ungrouped (the ungrouped section can’t be deleted or renamed).

VIEWING OPTIONS

The Servers page displays your virtual servers in your choice of grid or list format.

All of your virtual servers under all services will be displayed by default.

You can filter the view of your virtual servers in various ways.

SEARCH FOR A VIRTUAL SERVER

To locate an individual virtual server, type in part or the full name, server ID and power state (and the IP address if it has been configured through the Cloud Services management console).

Once located, you can click on a virtual server name to view the virtual server’s details.

VIRTUAL SERVER POWER STATES

Power states are used to control a virtual server’s operational status.

A virtual server can either be:

- Powered on
- Powered off
- Suspended
- In progress
You can change an individual virtual server’s power state through the Details tab of a virtual server, or through the Servers page.

While a virtual server is in Powered off or Suspended mode, you won’t accrue usage of CPU or RAM attributed to that virtual server.

*Through the Servers page*

Use the list view to select multiple servers and change all their power states at the same time.

*Through the Details tab*

The Details tab view displays a virtual server’s current power state.

Click on the power state icon to access the power state options dropdown.

Only the power state options applicable to the virtual server are shown.

Select the power state you’d like to apply to the virtual server. It may take a few minutes to process.
VIEW VIRTUAL SERVER DETAILS

Once you’ve selected a virtual server, you can view its configuration via the tabs displayed:

- Details
- Network
- Snapshots
- Activity log

DETAILS TAB
The Details tab displays your virtual server’s key specifications and resources.

From here you can view and change your server’s power state, the server name and description.

You can also modify CPU and RAM combinations and virtual disks.

NETWORK TAB
This tab will display the virtual server’s network connections.

View the MAC and IP address for each network connection, including the management connection. You can use the management connection’s secure IP address to RDP or SSH to the virtual server via SSL VPN.

If you’ve created a private network, you can request a second network connection for the virtual server, described as dual homing.

SNAPSHOTS TAB
This tab displays the most recent snapshot of your virtual server taken within the last 24 hours. Snapshots last for 24 hours.

From here you can create and delete a snapshot, as well as rollback your system configuration back to its state in the snapshot.

The tab title will display a green dot if a current snapshot exists.
ACTIVITY LOG TAB

View an activity log of your virtual servers’ tasks over a three-month period.

Use the Reports section to view activity logs of your cloud solution tasks by virtual server and task status.

CHANGE YOUR VIRTUAL SERVER’S NAME AND DESCRIPTION

The Details tab will display a virtual server’s name and description.

Select Edit to change the description.

Select Save once you’re done.

Select Rename to change the virtual server name.

Select Save once you’ve completed the change.

CHANGE YOUR VIRTUAL SERVER’S CPU AND RAM COMBINATION

The Details tab will display the virtual server’s current CPU and RAM combination.

Shut down your virtual server before changing its CPU and RAM. Do this by selecting the power state button and scroll down to the power off option. It may take a few minutes to process.

Select Modify to change this combination.

The CPU and RAM modification page will display the different CPU and RAM combinations available with your virtual server’s operating system.

Refer to the CPU and RAM combinations table to see the options available.

Once you have submitted the CPU and RAM modification and it has been completed you can power on your virtual server.
MODIFYING SOFTWARE

Need to make any changes?
Email us if you want to change the number of users or CPU associated with your software.

Need to cancel your software?
Uninstall the software and email us when you've done so.

Want to remove a virtual server with software already installed on it?
Back up your data, delete the server and email us.

UPGRADES AND DOWNGRADES

To install a different software version, you can request a new virtual server with software. That way you can migrate the data in your current virtual server across to your new one. You might need to check the vendor’s instructions before doing this.

You'll also need to uninstall the version of the software you no longer want on your current virtual server(s) and contact us when you do so. This is so we can adjust our software licence billing and reporting for you.

WHAT HAPPENS NEXT

Any requests to add and remove software – or to modify the number of software users – can take up to three business days to complete.
MANAGE SYSTEM DISKS AND VIRTUAL DISKS

The *Details* tab will display the system disk and any virtual disks installed on the virtual server. Here you can:

- *Add virtual disks*
- *Modify the system disk and virtual disks*
- *Remove virtual disks*

**ADD VIRTUAL DISKS**

Select the *Add virtual disk* button in the virtual server’s *Details* tab.

The *Add a virtual disk* button will take you to the disk modification page.

Enter a name for the virtual disk.

Enter or select the disk space size – ranging from a minimum of 10GB to a maximum of 1TB per disk. Each virtual server can only support up to 2TB of data in total.

The text box will round up to the nearest 10GB.

Select *Add virtual disk* to create the virtual disk.

You’ll need to create the virtual disk partition via your operating system to be able to use the extra space.

**RESIZE VIRTUAL DISKS**

You can modify your virtual disks through the virtual server’s *Details* tab.

Select *Modify* next to the disk’s name.

The *Modify* link will take you to the disk modification page.

From the virtual disk modification page, you will see the disk’s current storage capacity.

Enter or select the modified disk space size – in multiples of 10GB, ranging from a minimum of 10GB to a maximum of 1TB. Each virtual server can only support up to 2TB of data in total.

The text box will round up to the nearest 10GB. You can increase the disk’s size, but not decrease.

You’ll need to select *Update virtual disk* for the update to take effect.

To see the disk updates on your virtual server, you’ll need to increase the size of your partition in the operating system.

**RESIZE A SYSTEM DISK**

A virtual server’s original system disk size is based on the operating system you’ve selected:

- Linux 10GB
- Microsoft Windows Server 2003 20GB
- Microsoft Windows Server 2008 40GB
- Microsoft Windows Server 2012 60GB

You have the option of increasing the size of the system disk, through the virtual server’s *Details* tab, once the virtual server has been created.
You’ll need to resize the system disk partition to be able to use the extra space.

It’s not possible to reduce the size of a system disk or remove it completely.

**REMOVE VIRTUAL DISKS**

Select the *Remove* link next to the virtual disk you would like to delete.

A message will appear asking you to confirm that you want to remove the disk.

Select *Remove disk* to delete the disk. All data on this disk will be deleted immediately, so we recommend that you back up any data you wish to keep.

Select *Cancel* and you’ll be taken back to the virtual server’s *Details* tab view.
DELETE A VIRTUAL SERVER

You can delete a virtual server through the virtual server’s Details panel.

We recommend that you back up your data before starting this process. The deletion process will remove both your data and the virtual server. Your backup will last for the retention period you have previously selected.

You will need to shut down the virtual server before it can be deleted.

Click on the power state icon to access the power state options dropdown.

Select Shutdown.

It may take a few minutes to process.

To remove the virtual server, select the Delete button from the virtual server’s Details panel.

The Delete button will open a message to confirm that you want to remove the virtual server.

The virtual server will be deleted immediately.
MONITORING AND UPDATING YOUR OPERATING SYSTEM

You’re responsible for configuring and monitoring your operating system and ensuring that it’s up to date by installing updates.

We don’t provide support for any of these operating systems.

Contact your vendor directly if you have any issues:

- Microsoft Windows
- Red Hat
- SUSE
- Linux CentOS

INSTALL YOUR OWN SOFTWARE

You can install your own software on our cloud infrastructure at any time – you just need to confirm the licensing arrangements with the vendor.

To install an application from an ISO image you’ll need to copy it to the virtual server and then mount it locally.

Alternatively, if you chose a Windows operating system, you can request the software you need and have it installed by us in a state that’s ready for you to configure. Software purchases and installation requests can be made through the Cloud Services management console.

CLOUD READY

Want to know what software is compatible with your service? Our Cloud Innovation Centre team tests a variety of software products in our labs to see if they’re compatible with our services. For more information on whether a software package you wish to use is ‘cloud ready’, contact your Telstra representative.

LICENCE MOBILITY

If you have Microsoft Volume Licensing covered by a Microsoft Software Assurance contract, you may be able to use your existing eligible software licences on our cloud infrastructure.

Eligible software licences are:

- Microsoft Dynamics CRM Server
- Microsoft Exchange Server
- Microsoft Lync Server
- Microsoft SharePoint Server
- Microsoft SQL Server

Note: Microsoft Windows Server and desktop apps are ineligible.

How to apply

Step 1 – Determine which of your licences are eligible

View your licence status by logging in to the Microsoft Volume Licensing Service Centre and note which of the above eligible applications you’re licensed for. Typically, your IT or procurement department can access your licensing agreement details.
Step 2 – Verify your licences with Microsoft

Under the Authorised Mobility Partner section of the form, you'll need to write 'Telstra Corporation Limited' as your mobility partner and include our URL www.telstra.com and licensing email softwarelicensing@team.telstra.com. From there, wait for signed notification* from Microsoft before installing your software. This usually takes a few business days.

Step 3 – Install your application software

*If your licence(s) are eligible, Microsoft will email a counter-signed copy of the form both to you and us. If your licences can't be verified, Microsoft will return the verification form to you explaining why. You can make any necessary revisions and resubmit the form as many times as needed.

Remember, it's up to you to have the right licences to install and run software applications on your virtual servers. See our Responsibility Guide and Our Customer Terms (Australian customers only) or separate agreement with us.

For more details, see Microsoft Volume Licensing Software Assurance.
MANAGE YOUR NETWORKS AND SECURITY

The Cloud Services management console provides various ways to customise your cloud networks and security.

Use the Network & security page to:

- Create a private network
- Manage the connection to your existing Telstra Next IP® network or Global IP VPN
- Create and configure an IPsec VPN tunnel
- Create and configure a VLAN Extension tunnel
- Create firewalls and configure firewall rules
- Create and configure load balancers
- Assign SSL VPN users
- Set up an SMTP mail relay

For instructions on how to carry out these functions, see the Network and Security User Guide.

To see examples of network configurations constructed on cloud infrastructure, refer to our Infrastructure Design Guide.
CHAPTER 5
NETWORK CONNECTION TO VIRTUAL SERVERS

NETWORK CONNECTIONS
You can choose to contain a virtual server within a public or private network, or use dual homing to access a virtual from both networks.

Your public network is accessible through an internet connection, via your public interconnect. Individual virtual servers are accessible through their public IP address.

Your private network is only accessible through a private network connection, via your private interconnect. Individual virtual servers are accessible through their private IP address.

You can connect to a private network via:

- Your Telstra Next IP® network or Global IP VPN
- An IPsec VPN tunnel
- Both your Telstra Next IP® network (or Global IP VPN) and an IPsec VPN tunnel

Learn more about virtual server networks in our Network and Security User Guide.

SSL VPN MANAGEMENT CONNECTION TO VIRTUAL SERVERS
In addition to public and private network connections, a third connection point (a management IP address) is available to all individual virtual servers. Using secure remote access (SSL VPN), you can remotely and securely manage a virtual server through its management IP address. This connection can't be used as a secure access point for end users.

See the Network and Security User Guide for details of how to connect through SSL VPN and manage users.

ACCESS YOUR VIRTUAL SERVERS
To access a virtual server, you'll need:

- Your virtual server's IP address
- Access to either remote desktop software or a Linux secure shell client
FIND A VIRTUAL SERVER’S IP ADDRESS

You can locate your virtual server’s IP address in the virtual server’s Network tab: Infrastructure > Servers

<table>
<thead>
<tr>
<th>Connection Method</th>
<th>Virtual Server Connection Point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internet</td>
<td>Public IP address</td>
</tr>
<tr>
<td>Telstra Next IP® network</td>
<td>Private IP address</td>
</tr>
<tr>
<td>Global IP VPN</td>
<td>Private IP address</td>
</tr>
<tr>
<td>IPsec VPN</td>
<td>Private IP address</td>
</tr>
<tr>
<td>SSL VPN</td>
<td>Management IP address</td>
</tr>
<tr>
<td>Backup</td>
<td>Management IP address</td>
</tr>
</tbody>
</table>

If you’ve connected the virtual server to multiple networks, you can find the second connection’s IP address through the virtual server’s operating system.

The virtual server IP address corresponding to various connection methods, is shown in the following table.

CONNECT USING REMOTE DESKTOP SOFTWARE

You can connect to a virtual server running Windows using Remote Desktop software.

Enter your server’s IP address and then click Connect.

You will then be prompted to provide your server’s login details.

CONNECT USING A SECURE SHELL CLIENT

You can connect to a virtual server running Linux using a secure shell client, such as Putty.

Enter your server’s IP address, make sure that SSH is selected, and click Open.

You will then be prompted to provide your server’s login details.
ABOUT BACKUPS

You can enable nightly file system backups of some or all of your virtual server data.

From the *Servers* page, select *Backups* from the left-hand navigation to:

- *Create a backup*
- *Restore from a backup*
- *Delete a backup*

You can back up any of your virtual servers running operating systems we currently support. This includes the *operating system versions* listed in this guide, as well as any operating systems you have licensed from us in the past, and are currently using.
HOW TO CREATE BACKUPS

ACCESS THE BACKUPS PAGE

Access the backups modification page in one of two ways:

- Select Backups from the left-hand navigation from the Servers page
- Or
- Use the virtual server’s Details tab to select the Configure backups button

CREATE A BACKUP

Select the name of the virtual server(s) you would like to back up.

If you choose to back up multiple virtual servers here, they’ll all have the same backup configuration.

You’ll need to submit separate requests if you want to set up different backup configurations for each virtual server.

If you’re running a Linux operating system, the next step is to select the file systems you want to back up.

If you’re running a Windows operating system, you’ll be required to select the drives you want to back up.

We’ve provided just a few examples of file systems and drives you may want to back up.

You can select Other and specify other file systems or drives using the text box.

Choose a backup retention period.

The following backup retention periods are available:

<table>
<thead>
<tr>
<th>SHORT/LONG-TERM</th>
<th>RETENTION PERIOD</th>
<th>TOTAL NUMBER OF DAILY BACKUPS</th>
<th>TOTAL NUMBER OF MONTHLY BACKUPS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-term</td>
<td>1 week</td>
<td>7 x daily backups</td>
<td></td>
</tr>
<tr>
<td>Short-term</td>
<td>1 month</td>
<td>31 x daily backups</td>
<td></td>
</tr>
<tr>
<td>Short-term</td>
<td>1 quarter</td>
<td>93 x daily backups</td>
<td></td>
</tr>
<tr>
<td>Long-term</td>
<td>1 year</td>
<td>93 x daily backups</td>
<td>12 x monthly backups</td>
</tr>
<tr>
<td>Long-term</td>
<td>7 years</td>
<td>93 x daily backups</td>
<td>84 x monthly backups</td>
</tr>
</tbody>
</table>

Select Submit request.

The request may take up to a few days to complete.

We’ll get in contact with you if we need more information in order to process the request.
BACKUP USERS
You'll be provided with one username and password per company, per location. These credentials will allow you to perform backups and restores through the Cloud Services management console.

Note: your password will be provided to you via email and can't be changed by you. We suggest capturing your password immediately, as we do not keep a record of your password after it is issued to you.

BACKUP REPORTING
You'll receive a daily, weekly and monthly backup report.

BACKUP MANAGEMENT TOOLS
There are two recommended tools (based on EMC Avamar® technology) available to help you manage your backups:

- Client software
- Administrator software

If you are only using a Linux operating system on your virtual servers, you won’t have access to the administrator. Use the command line to initiate a non-scheduled backups and restores.

CLIENT SOFTWARE
The client software is pre-installed on any virtual server running a compatible operating system.

To load the software in Windows, log in to your virtual server and click on the Avamar icon in the taskbar.

From here, selecting Restore or Backup will take you to the web interface.

ADMINISTRATOR SOFTWARE
The administrator software is pre-installed on any virtual server running a compatible Windows operating system.

This software will require upgrading whenever our backup infrastructure is upgraded. We will inform you on occasions when this is required.

To load the software, log in to your virtual server and click on the administrator icon from your desktop.

From here you can:

- Restore from a backup
- Create a non-scheduled backup
- View the backup activity log
- Produce backup reports
YOUR LOGIN DETAILS

To access the administrator, enter your administrator username, password, the virtual server’s domain name and administrator server. These login details are not the same as your Cloud Services management console login details.

Your login details are emailed to you after we receive your first backup request. Passwords can be reset via the Cloud Services management console, for a fee. We do not keep a record of your passwords.

MANAGING YOUR BACKUPS

<table>
<thead>
<tr>
<th>RESTORING FROM A BACKUP</th>
<th>CREATING A NON-SCHEDULED BACKUP</th>
<th>CHANGE SCHEDULED BACKUP DIRECTORIES AND FOLDERS</th>
<th>CHANGE BACKUP RETENTION PERIODS</th>
</tr>
</thead>
<tbody>
<tr>
<td>To restore from a long-term backup, contact us. For short-term backups, select <em>Backup and Restore</em> using administrator and follow the prompts. Or, select <em>Restore</em> in the client. Check your backup reports to see if the restoration was successful.</td>
<td>Using administrator, select the <em>Backup and Restore</em> and follow the prompts. Or, select <em>Backup</em> in the client. To limit disruption to the backup platform’s servers, we recommend that you don’t create frequent non-scheduled backups.</td>
<td>If you would like to change the directories and folders for a scheduled backup, please contact us.</td>
<td>Log into the Cloud Services management console and go to Infrastructure &gt; Virtual servers &gt; Backups</td>
</tr>
</tbody>
</table>

AD HOC BACKUPS

A limited number of ad hoc backups can occur during the backup infrastructure maintenance window between 12PM and 6PM daily, when capacity is limited.

If your ad hoc backup cannot be performed at the time requested, it will be performed in the next available window.

Ad hoc backups can be initiated at any time except the backup infrastructure blackout window, occurring between 6AM and 12PM daily.

FIREWALL PORTS

The following TCP ports must be open to enable backups.

- 27000 to backup network
- 28000 to backup network
- 28002 from backup network
- 29000 to backup network
- 7778 to backup network
- 7779 to backup network
- 7780 to backup network
- 7781 to backup network
- 443 (used to access backup software and documentation)
- 111 to backup network
- 2049 to backup network
- 2052 to backup network
- 3008 to backup network
MICROSOFT WINDOWS SERVER AND FILESYSTEM BACKUPS

AD HOC BACKUPS

Click the Backup & Restore tab, the Backup and Restore window appears.

Click the Select for Backup tab.

Select a client in the clients tree. A list of the clients files, folders and directories is displayed to the right of the client's tree. Place a check mark next to the directories or files you wish to select for backup.

Select one or more directory and/or files.
Select Actions > Backup Now or click the toolbar icon shown immediately to the left. The On Demand Backup Options dialog box appears.

Review your backup settings. Clicking Cancel returns you to the Backup and Restore window where you can modify your backup selections.

If you want to change your backup retention setting, select the Retention period. To have this backup automatically deleted after a specific period of time - type the number of days, weeks, months or years. Set the retention period to either 30 days or 3 months.

Select None for the encryption method.

Select More Options. If there is an entry for a hostname in the field Store backup on Data Domain system select it as shown below. Click OK.

Click OK again. The On Demand Backup Options dialog box closes and the following status message appears: Backup initiated.

Click OK and monitor it from the Activity Monitor.
GROUP BACKUP

A backup group is a set of backups for one or more servers with a similar profile.

Click the Policy Management tab.

Click the Groups tab. Select the group you want to backup. Right mouse click, and choose Back Up Group Now.

Only select a group backup if you want to back up all the clients in the group.

The following status message appears: Backup initiated. Click OK and monitor it from Activity Monitor.
<table>
<thead>
<tr>
<th>Status</th>
<th>Error Code</th>
<th>Start Time (UTC)</th>
<th>Duration</th>
<th>Drill Time (UTC)</th>
<th>Type</th>
<th>Progress</th>
<th>Start Date</th>
<th>End Date</th>
<th>Error Code</th>
<th>Finish Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Failed</td>
<td>13687</td>
<td>2016-04-26 12:23</td>
<td>00:39:17</td>
<td>2016-04-26 12:23</td>
<td>On-Demand</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Running</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Completed</td>
<td></td>
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<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

CHAPTER 6  BACKUPS AND SNAPSHOTS
RESTORE FROM A BACKUP

The *Backup and Restore* window provides two alternative ways to locate and select a backup stored on the server. You can search for a backup by:

- Calendar date
- Content

RESTORE BY CALENDAR DATE

You can locate a stored backup by the date it was created.

Select *Backup and Restore* followed by the *Select for Restore* tab.

Select a client in the clients tree, then click the *Select for Restore* tab.

Click the *By Date* tab. A calendar will appear for locating backups stored on the backup platform. Dates highlighted in yellow on the calendar, indicate that a backup was performed on that date.

Selecting a highlighted backup date on the calendar populates the backups list immediately to the right of the calendar. Selecting one of the backups from the list, populates the contents list directly below the *Backup History* pane.

In the *Backup History* pane, browse to a valid backup date in the calendar (highlighted in yellow).

Select the backup from which you want to restore directories, folders or files.
Select **Actions > Restore Now**. The **Restore Options** dialog box appears.

Review your restore settings. Clicking **Cancel** will return you to the **Backup and Restore** window where you can modify your restore selections. **Restore Destination Choices** allows you to specify which client and top-level (root) directory will receive the restored files.

If you want to change your restore destination choices, select or type one of the following options:

- **Restore everything to its original location**
  This is the default destination — all files are restored to the original client in the original top-level (root) directory.

- **Restore everything to a different location**
  This option allows you to **restore to an alternate virtual server** (a target directory other than the origin of the backup).
RESTORING TO AN ALTERNATE VIRTUAL SERVER

Your restore target does not have to be the same virtual server the backup was originally created from.

You can restore a stored backup file to any type of Telstra virtual server that shares the same virtual data centre location as the virtual server the backup originated from.

You can restore to an alternate virtual server from either:

- A long-term backup
- A short-term backup

The target virtual server you are restoring to may need to be redirected to the backup platform containing the data to be restored. A virtual server can only be connected to one backup platform at a time.

Note: performing a single-directory restore to an alternate virtual server will only restore the contents of the directory. The original parent directory is not restored as part of this operation. However, if you restore two or more directories to an alternate virtual server, then the original parent directories will be restored along with the contents of those directories.

RESTORE A LONG-TERM BACKUP TO ALTERNATE VIRTUAL SERVER

To restore from a long-term backup, you’ll need to contact us to specify details including:

- The virtual server the backup was created from
- The backup files/folders you want to restore
- The alternate backup target virtual server
- The directory location you’d like the files restored to

We perform all restores from long-term backups. We’ll identify and advise you if a redirected restore is required when you make your backup request. A redirected restore could cause a temporary backup service interruption.

PREPARING TO RESTORE A SHORT-TERM BACKUP TO ALTERNATE VIRTUAL SERVER

You can check the backup platform that a virtual server is connected to, at any time by following the initial instructions for changing your backup platform connection.

To allow us to perform a restore to an alternate target, your target virtual server may need to be temporarily redirected to the backup platform where your chosen backup file(s) are stored.

If so, and you’re restoring to a managed virtual server (dedicated) then we’ll take care of the platform redirection for you.

We’ll advise you by email if you need to perform a redirection for a virtual server (dedicated) or virtual server (shared) restore target. In this case, you’ll need to change your backup platform connection.
POSSIBLE BACKUP SERVICE INTERRUPTION

If you have scheduled backups configured on your restore target virtual server, your backup service could be interrupted.

A virtual server can only be connected to one backup platform at a time. Daily scheduled backups will not perform successfully from your target virtual server while it’s temporarily redirected to a different backup platform.

If your redirected target is a managed virtual server (dedicated), we’ll email you to let you know when the redirected restore is complete, and your scheduled backups will resume on your target virtual server.

If your redirected target is a virtual server (shared) or virtual server (dedicated), we’ll advise you when the restore is complete. The scheduled backup service on your target virtual server will only resume when you change your backup platform connection to its original address.

CHANGING A BACKUP PLATFORM CONNECTION

These actions are not required if your alternative restore target is a managed virtual server (dedicated) – we’ll do this for you.

If your alternative restore target is a virtual server (shared) or virtual server (dedicated), use this process to either:

- Temporarily redirect a restore target virtual server to a different backup platform
- Switch a restore target virtual server back to its original backup platform

If you’re required to perform the redirect for the restore, we’ll send you an email with the new platform address you need to temporarily connect to.

Do not switch your target virtual server back to its original platform, until we advise you by email the restore has been completed.

The method for connecting a virtual server to a backup platform varies according to your virtual server’s operating system:

- Windows operating system
- Linux operating system
CHANGING A BACKUP PLATFORM CONNECTION FOR A VIRTUAL SERVER RUNNING WINDOWS

Right click the *Avamar* icon in your task tray.

Select *Manage*, then select *Activate Client*.

The *Activate Client Setup* window will appear.

The *Administrator Server Address* field will be pre-populated with the address of your virtual server’s current backup platform. This example shows a connection to `stlava03un01.tsb.avamar.com.au`.

If you just want to check the backup platform your virtual server is connected to, you can select *Close* at this stage to leave the settings unchanged.

If you are changing the backup platform, take note of the existing platform address before you redirect. The name of a virtual server’s current backup platform (Administrator server) appears in your most recent daily backup report.

Highlight the *Administrator Server Address* field, and replace the entry with the address of either:

- The backup platform where your backup file(s) is stored (before starting the redirected restore)
- The original backup platform of your target virtual server (once we advise you the restore is complete)
The pre-populated *Client Domain* will be replaced with ‘/’.

![Activate Client Setup](image)

If you’re restoring from a *short-term backup*, then you’ll need to enter your details in the *Client Domain* field. Refer to your most recent daily backup report for this information.

If you are restoring from a *long-term backup*, leave the *Client Domain* field as ‘/’.

Select *Activate*.

The following message will be displayed only if your target virtual server has previously been configured for scheduled backups.

Select *Yes*.

![Unactivate Client Warning](image)

A message should appear to confirm connection to a different backup platform was successful.

![Client Activation Complete](image)

Select *OK* to complete the process.
CHANGING A BACKUP PLATFORM CONNECTION FOR A VIRTUAL SERVER RUNNING LINUX

Find which backup platform your restore target virtual server is connected to by entering the following command:

```
root@lxtsbres01:~# service avagent status
```

In this example, the following response shows that the virtual server is currently connected to the backup platform address: *tsbava12un01.tsb.avamar.com.au*

avagent Info: Client Agent is running.
avagent Info: Client activated with MCS "tsbava12un01:28001"
avagent Info: Client using DPN "tsbava12un01.tsb.avamar.com.au"
avagent Info: avagent script version 11
version: 6.0.101-66
build date: Nov 5 2011 13:13:04
msg format: 13-10
SSL: TLSv1 OpenSSL 0.9.8g 19 Oct 2007
Zlib: 1.2.1.2
LZO: 1.08 Jul 2002
platform: Linux
OS version: RHEL
Processor: i686

If you are changing the backup platform, take note of the existing platform address before you redirect. The name of a virtual server's current backup platform (Administrator server) appears in your daily backup report.

To connect to a different backup platform, enter the command:

```
root@lxtsbres01:~# /usr/local/avamar/bin/avregister
=== Client Registration and Activation
This script will register and activate the client with the Administrator server.
```

Then, enter either:
- The backup platform where your backup file(s) is stored (before starting the redirected restore)
- The original backup platform of your target virtual server (once we advise you the restore is complete)

Enter the address of the new backup platform in the format: (DNS text name or numeric IP address, DNS name preferred).

Enter the Client Domain field.

If you're restoring from a short-term backup, then you'll need to enter your details in the Client Domain field. Refer to your most recent daily backup report in the *Domain Name* column.

If you are restoring from a long-term backup, leave the Client Domain field blank and press the enter key.

Enter the Avamar server domain [clients]:

In the following example, the new backup platform being connected to is *tsbava11un01*.

```
root@lxtsbres01:~# /usr/local/avamar/bin/avregister
=== Client Registration and Activation
This script will register and activate the client with the Administrator server.
Enter the Administrator server address (DNS text name or numeric IP address, DNS name preferred): tsbava11un01
Enter the Avamar server domain [clients]:
avagent.d Info: Stopping Avamar Client Agent (avagent)...
```
avagent.d Info: Client Agent stopped.
avagent Info <5241>: Logging to /usr/local/avamar/var/avagent.log
avagent.d Info: Client activated successfully.

avagent Info <5241>: Logging to /usr/local/avamar/var/avagent.log
avagent Info <5417>: daemonized as process id 22187
avagent.d Info: Client Agent started.
Registration Complete.

The command has only been successful if Registration Complete displays.

**SELECT A RESTORE DESTINATION**

You can browse your virtual servers to locate and select the client (virtual server) you wish to restore to.

Click Browse to locate a client or directory for the restore. You can also type this information if you prefer.

Select None for encryption.

Click OK. The Restore Options dialog box closes and the following status message appears: Restore initiated.
Click OK, then monitor the restore from Activity Monitor.
RESTORE BY CONTENT

You can locate stored backups by content (specific directories, folders or files within a backup).

Select a client in the clients tree.

Click the By File/Folder tab.

A Backup History pane will be displayed, used to retrieve all backups that contain a specified client directory, folder or file.

Click Browse and locate the desired directory, folder or file, click Retrieve.

The Version History table lists all versions and sizes for each directory, folder and files that have been backed up from this client.

Selecting a row in the Version History table shows all backups from the selected client containing the selected version of the directory, folder or file.

Select the backup from which you want to restore directories, folders or files.
Click OK. The Restore Options dialog box closes and the following status message appears: Restore initiated.

Click OK, then monitor the restore from the Activity Monitor.
VIEWING THE ACTIVITY REPORT

The Activity Report provides detailed information about your recent backup, restore and validation activities.

Click the Activity Report tab. A blank Activity Report window appears. Click Retrieve.

The activity report displays the information for each activity.

You can drill down in the activity session to view detailed log information, as shown in the example below.
BACKUP TROUBLESHOOTING

There are several actions you can take to rectify a non-performing backup or restore operation.

CHECK IF THE AGENT IS RUNNING

On a Windows operating system, open services.msc and check that the backup agent is running.

On a Linux operating system, you can check using command #avagent service status

CHECK COMMUNICATIONS RESTRICTIONS

Ensure there are no restrictions on communications by any firewall on your virtual server.

The following firewall TCP ports must be open to the backup platform:

27000
28000
28002
29000
7778
7779
7780
7781
443
111
2049
2052
3008

ENSURE THE AVAMAR FQDN CAN BE RESOLVED TO AN IP ADDRESS

Perform the following commands:

Windows

ping [Avamar FQDN]
nslookup [Avamar FQDN]

Linux

ping [Avamar FQDN]
nslookup [Avamar FQDN]

Solaris

ping -s [Avamar FQDN]
nslookup [Avamar FQDN]
HOST FILE FORMAT

If your virtual server is not using DNS, your host file should be in the format:
(IP address of your allocated administrator server) (fully qualified domain name (FQDN)) and (short name)

Backup details are pre-configured in the host file for each of your virtual servers (shared). Do not delete any backup host file entries.

If your original host file details have been deleted, you'll need to re-enter the host file entries corresponding to your virtual data centre locations:

- **Melbourne**
- **Hong Kong**
- **London**
- **Singapore**
- **New Jersey**

*Melbourne backup administrator servers*

<table>
<thead>
<tr>
<th>IP ADDRESS</th>
<th>FQDN</th>
<th>SHORT NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>58.162.75.4</td>
<td>dcbava06un01.dcb.avamar.com.au</td>
<td>dcbava06un01</td>
</tr>
<tr>
<td>58.162.75.5</td>
<td>dcbava07un01.dcb.avamar.com.au</td>
<td>dcbava07un01</td>
</tr>
<tr>
<td>58.162.75.6</td>
<td>dcbava08un01.dcb.avamar.com.au</td>
<td>dcbava08un01</td>
</tr>
<tr>
<td>58.162.75.7</td>
<td>dcbava09un01.dcb.avamar.com.au</td>
<td>dcbava09un01</td>
</tr>
<tr>
<td>58.162.75.8</td>
<td>dcbava10un01.dcb.avamar.com.au</td>
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**Hong Kong backup administrator servers**

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London backup administrator servers

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Singapore backup administrator servers

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New Jersey backup administrator servers

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CHECK VIRTUAL SERVER’S NETWORK PORT AND REQUIRED ROUTE ARE CONFIGURED

- **Windows**
  
ipconfig /all
  
  route print

- **Linux / Unix**

  ifconfig -a
  
  netstat -rnv

ENSURE COMMUNICATIONS ARE WORKING CORRECTLY

To test, enter the following command:

telnet [Avamar FQDN] 28001

Examples of a successful result for:

- **Linux**

  root@gnlxprmgtzcl01 ~]# telnet welava01un01.tsb.avamar.com.au 28001

    Trying 58.162.106.4...

    Connected to welava01un01.tsb.avamar.com.au (58.162.106.4).
Escape character is '^['.

*Windows*

Telnet welava01un01.tsb.avamar.com.au

The result is a blank screen.

**CHECK BACKUP LOGS**

- *Windows* logs are located at C:\Program Files\avs\var
- *Linux* logs are located at /usr/local/avamar/var

**IF TROUBLESHOOTING FAILS**

If these troubleshooting suggestions haven’t worked, email us with:

Screenshots of:

- `ipconfig /all`
- `route print`
- `host file entries`

File copies from your avs installation directory:

- `avagent.log`
- `avtar.cmd`
- `cid.bin`
SNAPSHOTS
You can create snapshots (full system image copies) of a compatible server at any time. You can restore a virtual server - within the lifespan of its snapshot - to its system state when the snapshot was taken.

To confirm the snapshot compatibility of your servers, check your operating system specifications directly from the operating system vendor and the vendor(s) of any software running on the virtual server.

The Snapshot tab displays the last snapshot taken of your virtual server. Snapshots last for 24 hours, unless overwritten by another snapshot.

From the Snapshot tab you can:

- Create a snapshot
- Revert your system configuration back to the snapshot
- Delete a snapshot

The tab title will display a green dot if a current snapshot exists.

CREATE A SNAPSHOT
Select the Create new snapshot button under the Snapshots tab.

A message will display asking you to confirm that you want to create a new snapshot.

The new snapshot will replace any existing snapshots.

The new snapshot will be stored for 24 hours and will be charged per GB-hour on top of your plan.

REVERT YOUR SYSTEM CONFIGURATION BACK TO THE SNAPSHOT
Select the Revert to snapshot button in the Snapshots tab.

A message will display asking you to confirm that you want to revert your system back to the snapshot’s point in time, including the CPU, RAM and storage configurations.

You can’t revert your system configuration back to a snapshot if a task is currently in progress. View the activity log to see what tasks are running on your virtual server.

You will not be able to use the virtual server during the reversal. Reverting times vary according to server size.

DELETE A SNAPSHOT
Select the Delete active snapshot link in the Snapshots tab.

A message will display asking you to confirm that you want to delete the snapshot.

If you delete a snapshot, you won’t be able to revert your system configuration back to the previous point in time.
CHAPTER 7
REPORTS

The Reports tab contains a range of reporting tools to help you to monitor your virtual server (shared) usage. Here you can view:

- Plan usage reports
- Backup usage reports*
- Network and security usage reports*
- Internet usage reports*
- The activity log*

*Refer to the Account Management Guide for details.

PLAN USAGE REPORTS

Review your plan’s CPU, RAM and storage usage to see if your current plan is right for your business.

The reports are updated at midnight (AEST) every day, unless there is a planned maintenance. You’ll always know when the reports are last updated:

CPU-hours and RAM GB-hours are not recorded on a virtual server while it’s in Powered off or Suspended mode.

The reports currently do not show internet usage.

If you have multiple virtual server (shared) compute services, select which compute service to report on. You can view the plan usage report for one compute service at a time.

You have the option to view plan usage reports by month or by year.

The monthly usage graph will display by default, and will show your current billing month by default.

A number of data filtering options are available when viewing your plan usage reports by month.
MONTHLY REPORTS

FILTERS
Plan usage reports allow you to filter data either by billing month and virtual server (or both).

You can view monthly usage back to 12 billing months. You can select one, multiple or all virtual servers.

SUBSCRIPTION PLAN USAGE REPORTS
Choose to view your monthly plan usage via either the graph or table.

This graph shows the plan name and how much CPU, RAM and storage have already been used in the billing month.

The red usage line identifies where you are in the billing month.

You can also access our pricing guides and your Telstra bill from here if you need to check plan and product fees.

The legend in the graph’s top right-hand corner explains what the coloured graph items mean. For example, if you exceed your plan’s CPU or RAM usage the bar will change colour.

You can also use the filters to view specific virtual servers in the graph.

The colours faded into the background represent the total plan usage.
PLAN USAGE TABLE

Collapsed by default, it provides an alternative view to the graph.

You can sort usage data in this table by clicking on the column headings.

PAY-AS-YOU-GO PLAN USAGE REPORTS

As with the monthly plan usage reports, you can choose to view your pay-as-you-go plan usage via either the graph or table.

PAY-AS-YOU-GO PLAN USAGE GRAPH

This graph shows the hours used for each CPU and RAM usage combination.

You can filter by virtual server to see which server is using the most resources.

You can expand the table to view CPU and RAM usage details. This allows you to compare your CPU-hours and RAM-hours to our monthly plans.
YEARY REPORTS

The yearly report displays separate CPU, RAM and storage usage graphs for the last 12 billing months (including the current month).

Here you can view:

- The plan’s usage allowance by month (grey)
- Actual usage for each month (blue)
- Excess usage above plan (red)

You can also view this information in the table below the graph.