Virtual Data Centre (VDC) User Guide

Release 1

CONTENTS

Selfcare VDC User Guide

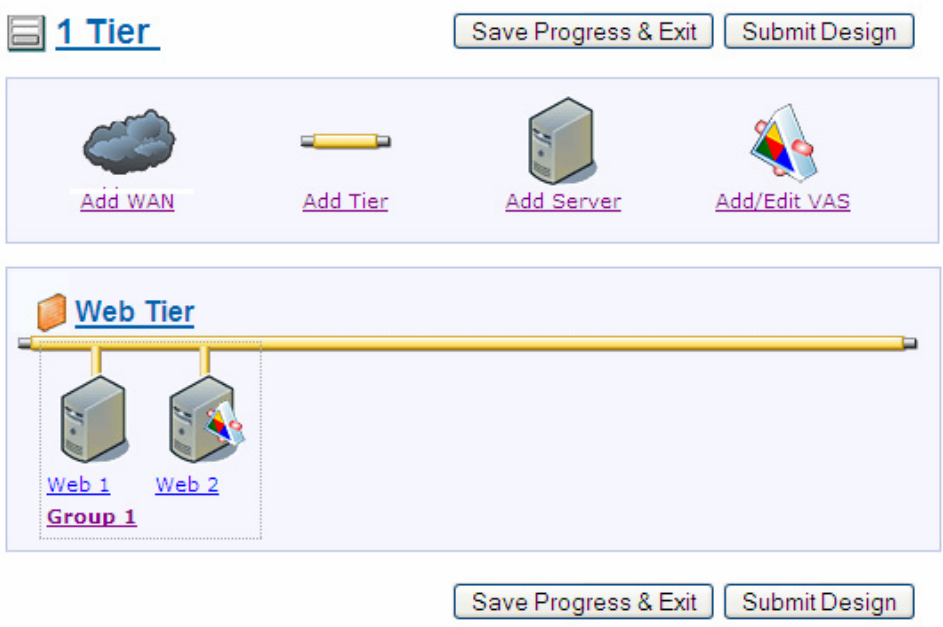
Introduction

This user guide is intended to assist Customers with the configuration and in-life management of their Virtual Data Centre (VDC) service from BT.
Selfcare offers VDC Customer a self build and self management interface for Network, Server and Storage elements of a VDC.

The VDC Overview

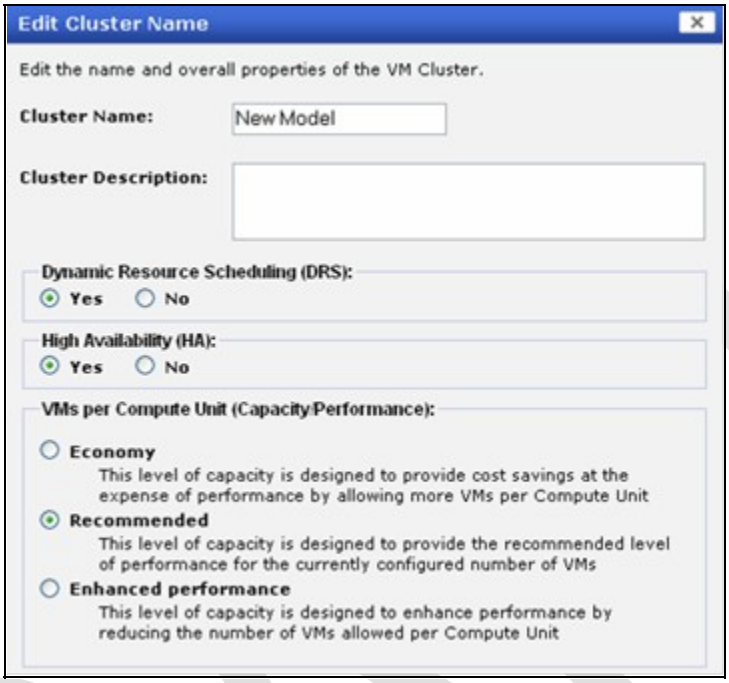
VDC is based on a shared architecture resource, processes and services are isolated from each other on a per Customer basis. A VDC consists of one or a number of Secure Application Domains called tiers, these provide a connection point for Virtual Servers Storage and Wide Area Network (WAN) Services and provide security, traffic management and networking functions. A Customer can have multiple VDC's under a single Selfcare account; each VDC is controlled individually as though it were a "Datacentre" in its own right.

The screenshot below shows a three tier templated VDC build, a Customer can either choose from one of the templated builds or build their own from a blank template.



VDC Settings

To set the VDC wide parameters click on the VDC name, this is located top right of the VDC graphical model screen.



Dynamic Resource Scheduling (DRS)

Selecting DRS allows the VDC to move (without service disruption) a Virtual Server between physical resources in order that the optimum usage of resources will occur. ***Note*** *DRS requires at least two resource pools, if only one resource pool has been selected a second will be added. If more than one resource pool already exists no further resource pools will be added*

High Availability (HA)

Selecting HA allows the VDC to move Virtual Server between physical resources in order that service is maintained in the unlikely event of resource failure. ***Note*** *HA requires at least two resource pools, if only one resource pool has been selected a second will be added. If more than one resource pool already exists no further resource pools will be added*

VDC Performance

Select the desired performance template for the VDC. This option will determine density of Virtual Servers.

Economy	Best suited to lightly used VDC's or where groups of Virtual Servers will be used independently of each other. Examples are test and development platforms or a platform where one group of Virtual Servers are used while other Virtual Servers groups are idol.
Standard	This option will provide an adequate level of performance for general purpose use.
Enhanced	Best suited to VDC's that require a higher level of performance or where large volumes of data are being processed by all servers within the VDC simultaneously.

WAN Services 

To Add Network Services, Internet, IPSec VPN or BT's On Net Hosting to a VDC click on the WAN link icon. Once the service(s) has been added they can be configured by clicking on the WAN Tab of the VDC.

Internet

Provides access to the World Wide Web (WWW) bandwidth options are "fixed" or "burstable. Bandwidth reports are provided on the BT Selfcare portal by clicking on the WAN service tag within the selected VDC under the "My VDC's" menu option.

The Customer sets amount of bandwidth available to their VDC. If larger volumes of traffic are generated "traffic shaping" will rate limit the traffic flow to keep the Customers traffic within the specified parameters.

Burstable bandwidth allows the Customer to burst to twice (2) their selected bandwidth. If traffic volumes exceed twice (2) the selected bandwidth "traffic shaping" will come in to effect. Traffic over and above this selected rate will be charged on a usage basis using a 95th percentile calculation.

VPN

Not available Release 1 this is a custom option and can be added to the VDC by contacting your sales manager of the BT DCS Helpdesk.

On Net Hosting

Not available Release 1 this is a custom option and can be added to the VDC by contacting your sales manager of the BT DCS Helpdesk.

Tiers

A "Tier" is a secure container to which all virtual services are attached. These virtual services include Network, Security Compute and storage functions. A tier can take advantage of any of the WAN services added to a Customers VDC.

To add a tier click on the tier icon once a tier has been added it must be given a unique name within the VDC.

Firewall Rules

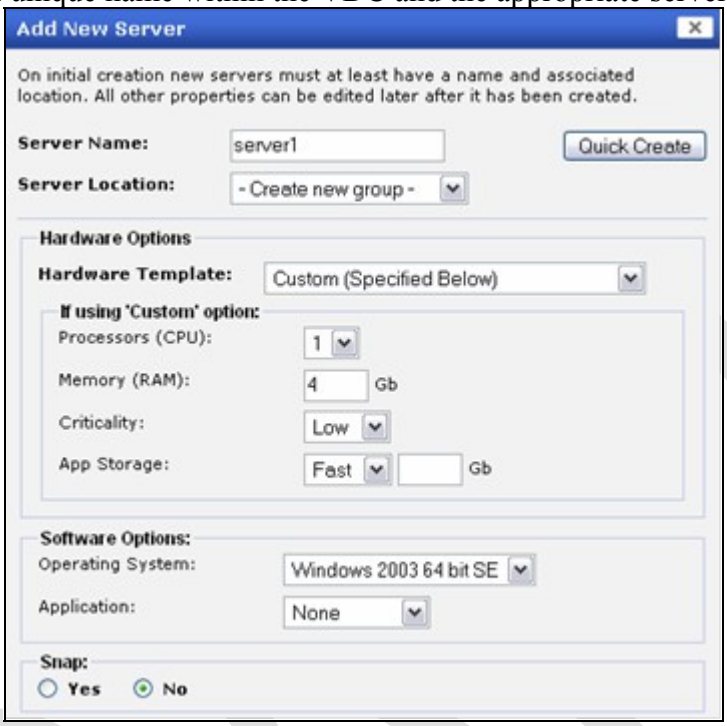
Firewall rules are set at the Tier level and configured by clicking on the tier icon. A firewall rule must have a source, destination, port and protocol. The table below gives the available options for the source and destinations. The default action is to "Deny" all traffic.
If certain combinations of Firewall rules considered to be dangerous are selected the Customer will be asked to accept the risk by clicking on the "risk waiver" tick box. Customers should read the contents of the risk waiver before doing so.

Source	A Virtual Server or Group within a single Tier *(note this can not be the same Tier as the Destination)* A WAN Service (Internet IPSec, ONH) A Common Service (SMTP, DNS cache)
Destination	A Virtual Server or Group within a single Tier *(note this can not be the same Tier as the Source)* A WAN Service (Internet IPSec, ONH) A Common Service (SMTP, DNS cache)

Note: Firewall rules cannot be created between servers within a single tier.

Virtual Servers 

To add a Virtual Server click on the server icon at the top of the configuration screen. A virtual Server must be given a unique name within the VDC and the appropriate server attributes set.



Virtual Server settings

Name – The name of the Virtual Server as it will appear on the screen

Group – The Group that this virtual Server will belong to. If no groups exist a new group will be created. Group names can be edited by clicking on the group label once created. A server can be added to any group with the VDC. Groups also allow the Virtual Servers to take advantage of load balancing (http/https), SSL and shared storage (See Group settings)

Hardware Template – The Hardware Template sets the default hardware settings for this Virtual Server, to assist Customers a suggested Small, Medium and Large configuration has been added to the list,
If Custom is selected the Customer can adjust (see table below) the Virtual Server. Server default settings can also be amended, if an alternative configuration to default is needed. Amending default settings will cause the resource allocation to be amended.

vCPU	The number of virtual CPU's - allowed values 1,2 and 4
vMEM	Amount of Virtual Memory - allowed values 1,2,4,8,16(Gbytes)
Criticality	This sets the priority of this Virtual Server.
RA Port	This is the port to be used for remote Access in association with the Remote Access IP Address.
App Storage	Storage directly associated with the Virtual Server and not available for use by other Virtual Servers in the Group or VDC.

Software Options – This allows the used to select the operating system and the application that will be provided on this Virtual Server.

Snap - Reserve and enables the SNAP function that allows back up of files and/or server environment.

Virtual Server Groups 

When a Virtual Server is crated is must be assigned either to an existing group or to a new group. This is down by selecting the appropriate option from the Group drop down menu. Attibutes that can be applied to a group are load balancing and storage. Firewall rules can also use the group name as a source or destination.

Load Balancing	HTTP and HTTPS traffic destined for a server within the group will be load balanced. Load balancing uses keep alives to ensure that the server is active and a least sessions algorithm in order to decide where to send the request.
Group Storage	This storage can be accessed by any server within the group. ***Note*** *in order to use this storage a virtual Servers Operating System (OS) must be configured to use network storage, this configuration is outside the scope of the automated provisioning and is OS dependent.*
SSL	Select this option to obtain a "self generated" digital certificate that will be loaded on to the SSL accelerator within the VDC platform. ***Note*** *Third Party Digital Certificated from approved vendors can be updated once the VDC has been provided via the [My VDC option]*

Value Added Services 

To add additional valued services to the VDC click on the VAS icon and select to which servers each of the VAS's are to be applied

AV

This option adds BT's managed anti-virus service to a virtual server. AV DAT files and engine updates will automatically be pushed to the server and managed in a way that keeps the files up to the latest available release.

Reports on the AV software activity can be viewed under the reports section of the BT selfcare portal.

IDP

This option adds BT's managed host based Intrusion Detection and Prevention service to a virtual server. Updates will automatically be pushed to the server and managed in a way that keeps the files up to the latest available release.

BT monitors the alerts generated by the software agent and respond in line with the Incident Response Plan (IRP) agreed between BT and the Customer.

Reports on the IDP software activity can be viewed under the reports section of the BT selfcare portal.

SSL

Allows Customers to request a "Self Signed" digital certificate for a VDC, this certificate will be loaded in to the virtual SSL accelerator. Once the Customers VDC has been provisioned the Customer can log on to Selfcare and update the digital certificate with one from an approved certification authority

Reports

Network

To be completed

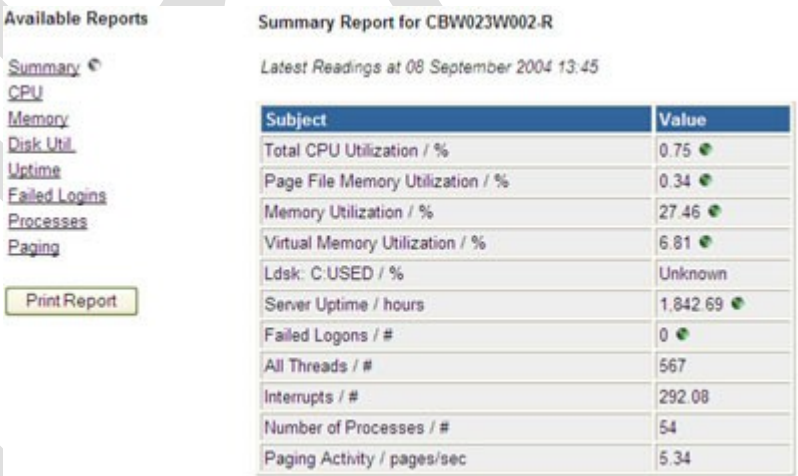
Server

The initial view presented to the customer is a summary report once generated the detailed report can be viewed that will cover the last 4 weeks of available data (new servers will only show the available data which may not completely fill the 4 week graphic view). This is accessed by clicking on any of the options ([CPU], [Memory], [Disk Util], [Uptime], [Failed Logins], [Processes] or [Paging]) options from the menu.

All Detailed Report graphs will have the ability to "Drill Down" in to the report to get a smaller time window on the horizontal axis; the smallest increment on this axis will vary between each detailed report and is a function of the server sampling interval. The detailed reports will also have the ability to attach a trend line by clicking on the "Trend Lines ON" option and where the vertical axis is a percentage measurement the customer has the ability to fix this scale from 0% to 100% by clicking on the "Fix Scale ON" option. The "Zoom Out" function allows the customer to return to the initial or full scale view.
Historical Reports

Reports for dates before those covered by the Detailed Report view a drop down menu will appear at the top of the detailed report enabling the customer to select a previous month's (calendar month) Trend Report. Historical reports will be available for the preceding twelve months (where data exists for this time period).

Reports for previous months will be static i.e. will not have the ability to Drill Down/Zoom out, Add Trends Lines or fix the scale.



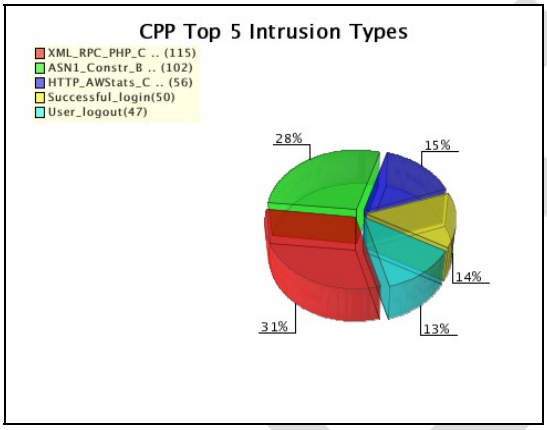
Storage

To be completed

VAS

IDP

Host based technologies are used so that customers can see what attacks these services have fended off. The reports list the top attacks by type and by source address so a customer can easily see not only where a sustained attack has been generated, but also the nature of that attack.



AV

Customers can then drill down my using the menu to show the detail of the number of viruses and the time when they were detected. *(**NOTE** on servers that are configured to be scanned once a day and not scan on access this will result in viruses appearing at the same time each day)*.

The Customer can also download the raw data in CSV format in order to facilitate off line analysis.