



West Cloud Service Prerequisites

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1 Introduction

Welcome to the West Unified Communications Services Success Management Program. In order to make the implementation of your solution as smooth as possible there are a number of pre-requisites that need to be adhered to.

2 Prerequisites – General

All pre-requisites must be passed and tested before West Unified Communications Services can attend site. In general, any SIP transformations, SIP NAT or SIP ALG should be turned off. West Unified Communications Services do not utilise NAT and these technologies are not required for SIP to work from customers behind a firewall. Customers should have NAT keep-alive enabled to receive inbound calls.

Please could you insert screen captures of your firewall configuration rules into the document and send the completed form back to your success manager via email.

	Prerequisite	Description	Responsibility	Verified
1	Connectivity Type	What type of connectivity is being used for the solution and what is the bandwidth? Is this connection being shared for voice and data use or just voice?	Customer	
2	Connectivity supplier	Who is providing the connectivity for the solution and what is the circuit or connection ID. For example for a BTnet circuit we will require the following information: FTIP003107XXXX	Customer	
3	Public Address range	Supply current public IP address for additional security from the cloud service.	Customer	
4	Handsets UK	Hardphones and softphones: Firewalls must allow access to this range of addresses 91.208.141.0 /24 & 192.33.132.0/23 on the following ports: SIPUDP 5060 RTPUDP 10000-20000	Customer	

	Prerequisite	Description	Responsibility	Verified
5	Handsets US	<p>Hardphones and softphones:</p> <p>Firewalls must allow access to this range of address 72.28.107.0/24 on the following ports:</p> <p>SIPUDP 5060 RTPUDP 10000-20000</p>	Customer	
6	Prioritisation	<p>Ensure voice is marked and prioritised on any switches, firewalls, and routers as shown in section Prioritisation and QoS.</p> <p>Softphones should also have their traffic prioritised through Windows Group Policy where possible as detailed in MNCC Softphone – Windows Group Policy.</p>	Customer	
7	QoS	<p>It is also advised that QoS is configured on any switches, firewalls, and routers used in the voice solution. See section Prioritisation and QoS for configuration guidelines.</p>	Customer	

	Prerequisite	Description	Responsibility	Verified
8	Connectivity to URLs and IP ranges	<p>Test Connectivity to Cloud Voice web site from a client PC that will be using Cloud Voice admin function (http port 80). https://pbx.magneticnorth.com/ <u>Your cluster URL will be provided by your Project Manager.</u> US Cluster http://pbx11.magneticnorth.com http://speedtest.magneticnorth.com http://beacon.magneticnorth.com</p>	Customer	
9	NTP	<p>In order for your telephones to communicate with our timeserver, keeping them up to date with daylight savings changes, please ensure that NTP is allowed inbound and outbound to the telephones. http://beacon.magneticnorth.com</p>	Customer	

	Prerequisite	Description	Responsibility	Verified
10	Speedtest	<p>Please add access for the following:</p> <ul style="list-style-type: none"> • TCP Port 80 • TCP & UDP ports 5060, 20000, 20001 <p>to the following IPs to run successful speed tests:</p> <p>EMEA - speedtest. magneticnorth.com - 91.208.141.190</p> <p>AMER - speedtest3. magn eticnorth .com - 72.28.107.125</p> <p>APAC - speedtest4. magn eticnorth .com - 203.175.164.58</p> <p>When using the West Unified Communications Services Client the desktop PC will require access to these ports and addresses.</p>	Customer	
11	SIP transformations	<p>Switch off SIP transformations, where enabled.</p> <p>See section SIP - Router / Firewall Examples for some examples.</p>	Customer	
12	SIP NAT	<p>Switch off SIP NAT, where enabled.</p> <p>See section SIP - Router / Firewall Examples for some examples.</p>	Customer	

	Prerequisite	Description	Responsibility	Verified
13	SIP ALG	Switch off SIP ALG, where enabled. See section SIP – Router / Firewall Examples for some examples .	Customer	
14	NAT keep-alive	Customers should have NAT keep-alive enabled to receive inbound calls. The UDP idle timeout on the firewalls for firewall state and NAT translation entries should also be a minimum 180 seconds.	Customer	
15	IP addressing	The telephones will obtain an IP address on your network from DHCP, please ensure that you have enough free IP addresses.	Customer	
16	DNS	The telephones will need to be able to perform DNS lookups on the URL's listed in item 8 . Please ensure that valid DNS server addresses are assigned via DHCP.	Customer	
17	Handset Power (POE)	If you are using POE Handsets, ensure that the switch supports Power Over Ethernet. If this is not the case, please contact sales to purchase any required power supplies. Ensuring each location has a spare power socket.	Customer	



	Prerequisite	Description	Responsibility	Verified
18	Polycom Provisioning	If you have purchased Polycom handsets (note this excludes Polycom Conference Spider phones) please add an option 160 to your DHCP server. See section DHCP Option 160 .	Customer	
19	LDAP	The telephones will need to be able to connect via LDAP to perform a directory lookup to the West Cloud UC. Please ensure that TCP Port 389 is allowed to beacon. magneticnorth .com. 91.208.141.0/24 & 192.33.132.0/23	Customer	
20	Chat & Presence	To enable MNCC with IM & P we will need port 5222 open to xmpp. magneticnorth .com.	Customer	
21	xmpp federation	TCP port 5269 is open to our server xmpp. magneticnorth .com	Customer	



	Prerequisite	Description	Responsibility	Verified
22	Attendant Console	<p>iSymphony client software requires access to console. magneticnorth.com via the following ports:</p> <ul style="list-style-type: none">• Port 5800• Port 80• Port 8080 <p>iSymphony will use your internet browser and must not be accessed via a proxy.</p>	Customer	
23	Bria Stretto	<p>Ensure that TCP port 443 is opened up and that the following URLs are white listed on the firewall : ccs3.cloudprovisioning.com & https://ccs3.cloudprovisioning.com:18083/stretto/sam.html</p> <p>Minimum system requirements for running the client are available here</p>	Customer	
24	Router	Provide Router brand and model information.	Customer	
25	Firewall	Provide Firewall brand, model and confirm if the firewall is integrated with the router.	Customer	

	Prerequisite	Description	Responsibility	Verified
26	Network Diagram	Provide a basic diagram showing how phones are connected on the internal network including switches, firewalls and routers.	Customer	
27	Porting	If you are porting numbers to West Unified Communications Services please supply the latest copy of your telephone bill.	Customer	
28	MNCC Softphone	Minimum system requirements for running MNCC are available here	Customer	

2.1 Prioritisation and QoS

The following settings for marking and prioritising traffic critical to the Cloud Voice solution should be configured on all switches, firewalls, and routers (where possible) that are used for delivery of the solution. The values below are configured in handsets and softphones as part of provisioning and must be honoured for them to work correctly.

It is recommended that QoS settings are configured explicitly rather than using built in 'auto QoS' tools that can sometimes incorrectly categorise traffic and therefore lead to problems further down the path when it comes to queuing.

Critical

Destination IP	Destination Port	Classification	DSCP	BT MPLS
192.33.132.0/23 91.208.141.0/24 199.38.38.64/26 - US Only	UDP - 10000 - 20000	Real-Time Transport Protocol	46	EF
192.33.132.0/23 91.208.141.0/24 199.38.38.64/26 - US Only	UDP & TCP - 5060 - 5080	Signalling Traffic	24	AF3

Optional

Destination IP	Destination Port	Classification	DSCP	BT MPLS
192.33.132.0/23	TCP - HTTP (80);	Web Interface	10	AF1
91.208.141.0/24	TCP - HTTPS (443);	Applications		
199.38.38.64/26 – US Only				

The bandwidth requirement is dependent upon the codec being used, however the typical allocations per channel are recommended as follows:

	G711	G729	Signalling
Bandwidth / Channel	90 Kbps	35 Kbps	3 Kbps

2.2 QoS Firewall Examples

Below are some example guides on how to configure QoS on common firewall devices.

Brand	Tip
ASA	Configure priority queuing if possible, following this guide: http://www.cisco.com/c/en/us/td/docs/security/asa/asa82/configuration/guide/config/conns_qos.html
Netgear DGFV338	Create an outbound rule to both 91.208.141.0/24 & 192.33.132.0/23 and set QoS to Minimize-Delay. 199.38.38.64/26 will need including if the Customer is US based.
Fortigate	http://docs.fortinet.com/uploaded/files/1049/fortigate-traffic-shaping-40-mr3.pdf

2.3 SIP – Router / Firewall Examples

Below are some tips on where to configure the firewall/router specific settings in relation to ALG and NAT.

Brand	Tip
Sonicwall	SIP Transformations sections should be DISABLED (unchecked).
Cisco ASA	Disable SIP class inspection if enabled <i>policy-map global_policy</i> <i>class inspection_default</i> <i>no inspect sip</i>

Brand	Tip
Juniper:	Disable SIP ALG, or if an internal policy requires it to stay on: Under SIP enable <i>Enable permit NAT applied</i> and <i>Enable permit routed</i>
Netgear	Disable SIP ALG under Advanced/WAN

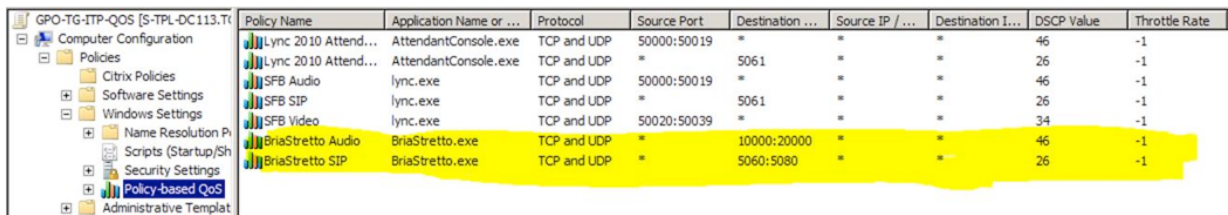
2.4 DHCP Option 160

All we need to do is create an option 160 to target it to `http://beacon.magneticnorth.com/cfg/Tenant_Name_Polycom` as a string.

The value **Tenant_Name_Polycom** must be confirmed by the Success Manager with West Unified Communications Services NetOps department before deployment.

2.5 Softphone QoS – Windows Group Policy

Customers using softphones, including the MNCC phone, should enable a GPO that marks the voice traffic for prioritisation across the network. A guide for the MNCC softphone can be provided by West Unified Communications Services on request, however a screenshot on how to implement the setting for the Bria Stretto softphone can be seen below:



Policy Name	Application Name or ...	Protocol	Source Port	Destination ...	Source IP / ...	Destination I...	DSCP Value	Throttle Rate
Lync 2010 Attend...	AttendantConsole.exe	TCP and UDP	50000:50019	*	*	*	46	-1
Lync 2010 Attend...	AttendantConsole.exe	TCP and UDP	*	5061	*	*	26	-1
SFB Audio	lync.exe	TCP and UDP	50000:50019	*	*	*	46	-1
SFB SIP	lync.exe	TCP and UDP	*	5061	*	*	26	-1
SFB Video	lync.exe	TCP and UDP	50020:50039	*	*	*	34	-1
BriaStretto Audio	BriaStretto.exe	TCP and UDP	*	10000:20000	*	*	46	-1
BriaStretto SIP	BriaStretto.exe	TCP and UDP	*	5060:5080	*	*	26	-1

- Within Policy Based QoS add two policies for the BriaStretto.exe file with the above credentials for RTP and SIP traffic
 - SIP Traffic should be marked as DSCP value 26 (AF31) on BT MPLS WAN's only. For non BT MPLS mark this traffic to 24 (CS3)

3 Prerequisites – West Cloud Contact Pro

	Prerequisite	Description	Responsibility	Verified
1	Connectivity to West Cloud Contact Pro URL	<p>Test Connectivity to the Cloud Contact Pro web site from each client PC that will be using it.</p> <p>http://dialXX.magneticnorth.com/maximise Your cluster URL will be provided by your Project Manager.</p> <p>Test connectivity to the Cloud Call Recording web site from each client PC that will be using it.</p> <p>http://record01.magneticnorth.com</p>	Customer	
2	Active X	<p>Ensure each client PC using Cloud Contact Pro and running screen pop macros is able to download and install ActiveX controls.</p> <p>Verify each client PC using Cloud Call Recording to view calls is able to download and install ActiveX controls</p>	Customer	
3	Trusted Site	<p>Please add the URLs above into all client PCs as a trusted site (for IE8 and above).</p>	Customer	



	Prerequisite	Description	Responsibility	Verified
4	Pop-ups	Please ensure that for access to your Cloud Contact Pro cluster that there are no 3rd party applications blocking this site, such as pop up blockers or antivirus / fire wall applications.	Customer	
5	Web Proxy	Please ensure that there is no proxy server between your network and the web URLs.	Customer	

4 Prerequisites – West Cloud Call Recording

Internet Explorer	Enable
IE11	Cloud Call Recording When using IE11, ensure access to the F12 developer tools in IE so that emulation settings can be set to IE9/10 for the Cloud Call Recording servers.



5 Prerequisites – Business As Usual Support

	Prerequisite	Description	Responsibility	Verified
1	Connectivity to West support URL	<p>Test connectivity to Bomgar, ensure that you can access the website and perform a screen share with our support operatives.</p> <p>https://is.magneticnorth.com</p> <p><i>Bomgar is a remote support solution that allows support technicians to remotely connect to end-user systems through firewalls from their computer.</i></p>	Customer	

6 Hardware – Resale / Reuse

Please be aware should you sell any of the telephone hardware you should perform a factory reset back to the default settings to wipe your current configuration from the handset.

It is your responsibility as the owner of the equipment to ensure this is performed on any physical handsets before they leave the premises.

7 Bria Stretto Pre-requisites

The following minimum system requirements are needed to run Bria Stretto.

Processor	Minimum: Core 2 Duo 2.1 GHz Recommended: i5 / i7 2.4 GHz and above
Memory	Minimum: 4GB RAM Recommended: 8 GB RAM and above
Hard Disk Space	400 MB (Install/Upgrade, 200 MB operation)
Operating system	Microsoft Windows 7 SP1 * Microsoft Windows 8.1 (Desktop mode) * Microsoft Windows 10 (Creators Update recommended), including 2 in 1 tablet support * Mac OS X 10.11 (El Capitan) Mac OS X 10.12 (Sierra)
Connection	IP network connection (broadband, LAN, wireless); Constant Internet connection

8 MNCC Pre-requisites

Cloud Connect (MNCC) is compatible with Windows and Mac OS X operating systems.

Windows 8 (and above) 64 bit with latest service packs applied

- § Intel® Pentium® Dual-Core Processor E6700 (or better)
- § 4GB RAM (minimum required for MNCC Softphone) - 8Gb Recommended depending on other apps running
- § .NET Framework 3.5 service pack 1
- § .NET Framework 2.0 on the client
- § Administrator privileges for installation
- § Java 7 runtime

Mac OS X

- § Intel based Mac running Mac OS X 10.7.3 (Lion) or later
- § Administrator privileges for installation
- § 64 bit browser
- § Java 7 runtime