Gemini 2020 Guide to Connectivity

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LIST OF FIGURES

1 Introduction

This document details the configuration necessary for External Users to access the Gemini / Exit Service

References to various aspects of the Gemini interface have been made throughout the document. The key points that need the readers' attention are highlighted using Blue font.

1.1 Purpose and Scope

This document details the necessary configuration changes required by the external users to access the Gemini Production environment. It covers the following topics:

- ✓ Network configuration required to access Gemini / Exit screen service
- ✓ Accessing Gemini / Exit API Service
- ✓ Procedures to access the Gemini Production Screen service
- ✓ Disaster Recovery arrangements (XP1)

1.2 Intended Audience

- ✓ Gemini external users
- ✓ Teams who provide support to external users in facilitating access to Gemini through Citrix or API

1.3 Gemini Services

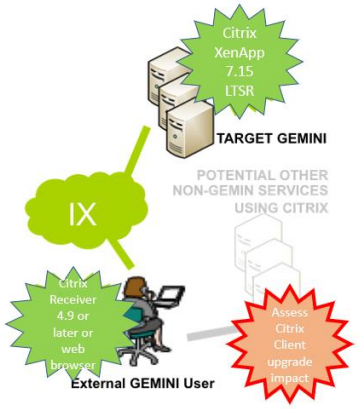
- ✓ Gemini runs two distinct services, a screen service (accessed via Citrix) and an Application Programming Interface (API) service.
- ✓ Both services are accessed via the private network which connects the Xoserve Data Centres with external parties holding shipper or supplier licenses. This private network is known as the IX Network or IXN for short.
- ✓ Both services are accessed via the HTTPS protocol

2 Online (Citrix) Access Configuration Details

2.1 Infrastructure

The diagram (figure 1) below shows the target configuration required for all external users to access Gemini using fully supported infrastructure. To achieve a fully supported infrastructure, Xoserve recommends all external users deploy a compatible Citrix receiver that has been fully tested using vanilla Windows operating system. Users who do not want to use or upgrade the Citrix receiver can now also use the web browser version instead.

This recommended change must be impact assessed by all external users to ensure any non-Gemini access using Citrix is retained.



2.2 Network Requirements

The Gemini Production Screen service is accessed through a Citrix connection and it is hosted in TCS Enterprise Cloud Platform having a primary and Disaster Recovery site to ensure service availability. The following network requirements must be met in order to access the Gemini Production Screen service through Citrix.

- ✓ Network link must be established from the user location to Xoserve Data Centres.
- ✓ Port 443 must be used to submit requests to Gemini Citrix in order to access Gemini Screen service. Therefore, if you connect to the IXN via a firewall you must have this port open.

- ✓ You must resolve the FQDN prod-ix-citrix.geminints.com to the IP address 194.129.160.241 on your network. Xoserve does not provide a DNS service for access via the IXN.
- ✓ Requests to the IP address 194.129.160.241 must be routed to Xoserve Data centres via the IXN.

2.3 Citrix Client for Windows

An installed Citrix client is required on the users' desktop to enable connection to the Citrix server for Gemini. The Xoserve Citrix XenApp server is being upgraded to version 7.15 LTSR.
Xoserve recommends users review and upgrade their Citrix receiver to a version compatible with Citrix XenApp 7.15 LTSR, current Citrix documentation recommends the use of Citrix Workspace app or Citrix receiver version 4.9 or later.
Users who do not want to use or upgrade the Citrix receiver can now also use the web browser version instead.

2.4 Best Practices to deploy Citrix Clients

Below are some best practise guidelines to follow when deploying the Citrix clients:

- ✓ It is recommended that you download the Citrix client versions from the Xoserve Website. This will ensure that you use the Citrix client versions which have been thoroughly tested with target GEMINI. However, there are other Citrix client's versions which you may wish to use and are available from the vendor (Citrix website - www.citrix.com).
- ✓ It is highly important that you assess the impact of installing or upgrading the Citrix client versions prior to deploying it to your systems, as you may experience issues resulting from a different combination of Operating Systems, Internet Explorer versions or any other potential non-Gemini services hosted on Citrix services, (e.g. MetaFrame, XenApp), within your organisation.
- ✓ It is good practise to test the installation and back-out of Citrix client versions on one desktop in your environment and verify that there is no impact, before rolling out to other users as applicable, to access target GEMINI.

- ✓ As per Infrastructure best practice, it is always recommended to keep a copy of the installable file for your current Citrix client (before you proceed with the upgrade to the Citrix client versions for target GEMINI), in case you are required to revert. (If you are upgrading the Windows OS to support the new version of Citrix client then you may want to consider the necessary back-out procedure for the OS installation as well). It is to be noted however, that you will need to have the Citrix client to be able to access target GEMINI.
- ✓ Consider any other procedures that your organisation (or Infrastructure support team) suggests.

2.4.1 Citrix Client Installation Preparation

Make sure you have met all the prerequisites mentioned in the Appendix section of this document for Citrix client installations and follow the best practices suggested in section 2.3.1. Once all the requirements are met and your Impact Assessment output is confirmed to be positive to proceed, then the following needs to be done.

- ✓ Download the appropriate Citrix clients from Xoserve Website
- ✓ Uninstall the previous versions of any Citrix client if it's already installed on your machine
- ✓ Install the new Citrix client that is downloaded from Xoserve website

Important Notes:

- ✓ Uninstalling and reinstalling Citrix client will require the use of administrative privileges on your desktop.
- ✓ Upgrades are also supported with a few versions of Citrix client. However, to keep the installation uniform across users, it's recommended to go with new installation instead of an upgrade.
- ✓ If your organization has any deployments methods in place for deploying new software, then you are advised to check with your internal IT department and follow their instructions.
- ✓ If users decide to upgrade their System OS or IE version or plan to deploy any patches in the future, then they need to ensure that they still comply with the system requirements/pre-requisites as mentioned in this Citrix user guide before they do so. If the prerequisites mentioned in this Citrix user guide are not met at any time, there is a risk that the Citrix client may not work with target GEMINI. As per best practice; it is also advised to perform appropriate impact assessment, review and tests prior to rolling any upgrade.

Disclaimer:

- Both the Citrix client versions are tested for accessing target Gemini on Windows 10 Operating System with IE11. If you are using any other OS versions and/or browser versions, then it is recommended that you test the Citrix client versions with your setup and test access to target GEMINI. Xoserve will endeavour to provide assistance where possible; however, the ultimate responsibility lies with you.
- Post GRP Go-live, Xoserve recommends that you install Citrix client compatible with Citrix XenApp 7.15 LTSR. However if you continue to use earlier Citrix client versions and if there are any support requirements, then vendor support might not be available.
- At any time, if user does not meet the pre-requisites mentioned for the Citrix clients under the Appendix section in this document, there is a risk that the Citrix client may not work with target GEMINI. User is responsible for ensuring the pre-requisites are met in order to be able to install/use the Citrix client mentioned in this document with target GEMINI.
- You will need to ensure that you follow the best practices for Infrastructure deployment and that you have the necessary backups/installable to revert if you need to.

2.5 Gemini Production access through Citrix Receiver

Launch the URL https://prod-ix-citrix.geminints.com/ to access the Production Gemini Citrix. The Citrix Logon page displays with the heading "Gemini Production Citrix Access" (Figure 1).

Figure 1: Gemini Citrix Logon page

Enter your Citrix Username and Password and click the Logon button. The first-time Users' login they will be provided with a default password; Users will then be prompted to change the password for the first time. The following password complexity requirements should be met when setting up a new password:

a. The password should not contain the user's account name or parts of the user's full name that exceed two consecutive characters
b. Minimum Password length should be 8 Characters
c. The password should contain characters from three of the following four categories:
   - ✓ English uppercase characters (A through Z)
   - ✓ English lowercase characters (a through z)
   - ✓ Base 10 digits (0 through 9)
   - ✓ Non-alphabetic characters (for example! $, #, %)

Other settings as per the group policy for Citrix users are:

- ✓ Minimum Password age (The period that a password must be used before the User can change it) - 1 Day
- ✓ Maximum Password age (The period that a password can be used before the system requires the User to change it) - 30 days
- ✓ Enforce password history - 5 passwords remembered

Once authenticated a window containing the "Gemini Production**"** icon will be displayed as shown in figure 2. Click the "Gemini Production" icon to access the Gemini Production environment.

Figure 2: Citrix homepage

2.6 Gemini Logon

The Gemini Production logon page is displayed as shown in figure 3. Enter your Gemini screen service credentials to access it further.

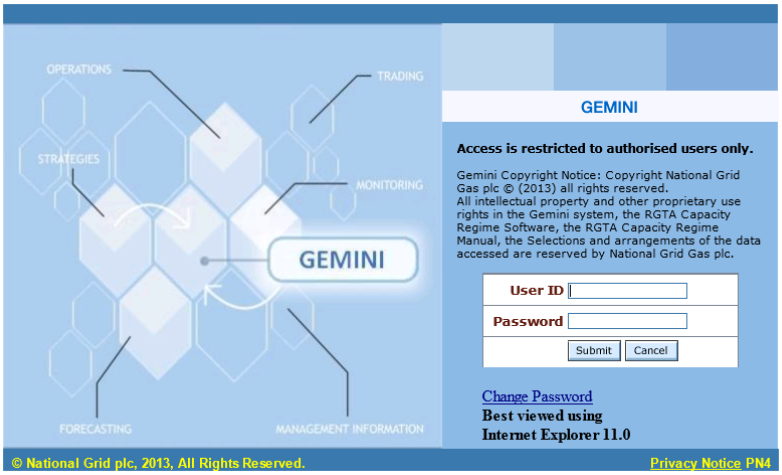


Figure 3: Target Gemini Logon Page

Important Notes:

Click on the "Gemini Production" icon to invoke the Citrix client. For the first time after invoking, you will be prompted to specify permissions you wish to grant to your local files. Gemini Citrix servers are configured with the setting "Map Client Drives" turned on. This will allow you to seamlessly save Adobe PDF report files to your desktop.

When you display these reports within the Citrix client, they're generated within Adobe Acrobat Reader running on the Citrix server. You should open the "File Save" dialogue from within Adobe Acrobat Reader, your workstation local drives are mapped as "Local Disk ('*Drive Letter*': on '*your desktop name*') and appears in the list of available drives that are visible to the application, for example "Local Disk *C*: on *Computer1*".

In order to facilitate this feature, the following access permissions are recommended:

- Choose the "Permit All Access" option, if you are using Citrix Receiver, and check the "Do not ask me again for this site" option – Figure 4

If you do not do this, you will be unable to save PDF files locally. The same principle applies when saving Comma Separated Variable (CSV) files locally.

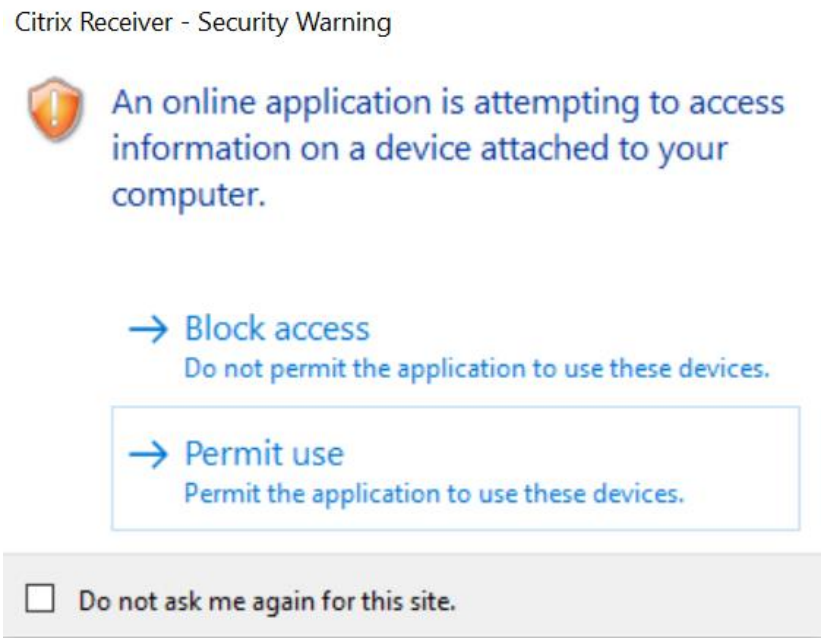


Figure 4 : Client File Security Prompt in Citrix Receiver version 4.12

2.7 Gemini Production access through Citrix Web browser

The newer version of Gemini Citrix provides a browser version to logon if you do not have a Citrix receiver installed.

Launch the URL https://prod-ix-citrix.geminints.com/ to access the Production Gemini Citrix.

If there is no Citrix receiver installed, the page in figure 5 below is displayed. Click on the "Log On" to continue to the Citrix login page.

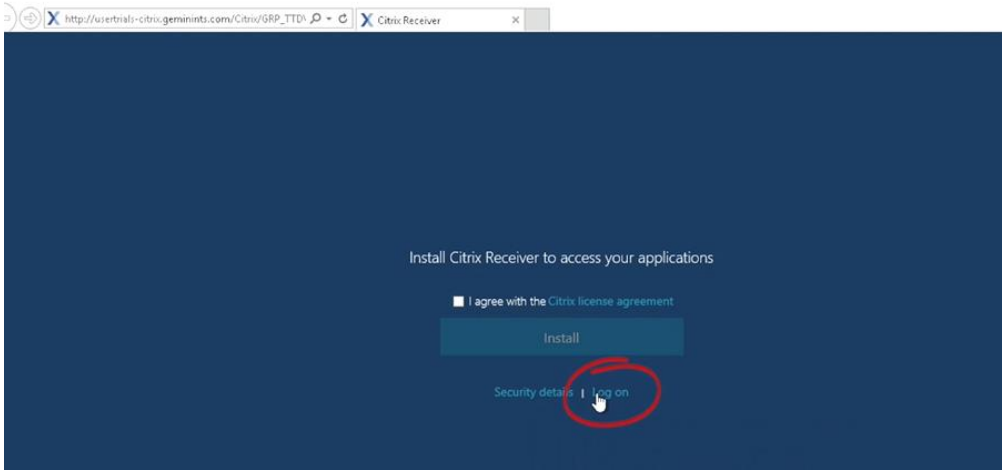


Figure 5: Detecting Receiver

The Citrix home page displays with the heading "Gemini Production Citrix Access" (Figure 6).

Enter your Citrix Username and Password and click the Logon button.

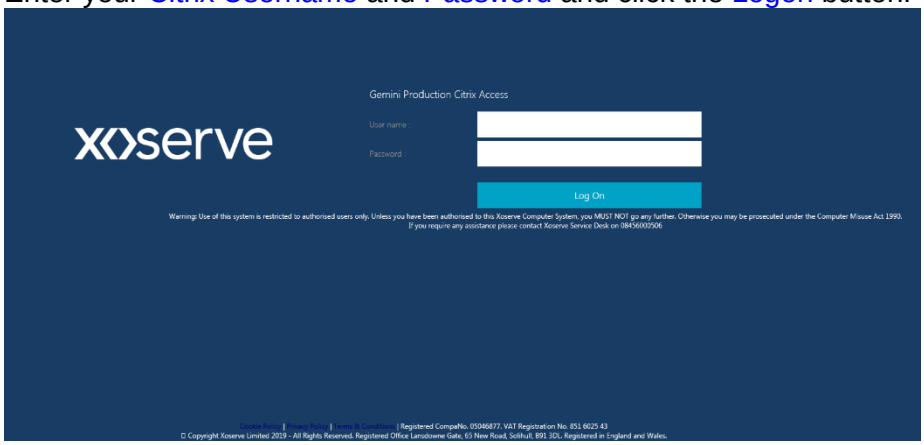


Figure 6 : Citrix Logon page

Once authenticated a window containing the "Gemini Production**"** icon will be displayed as shown in figure 7. Click the "Gemini Production" icon to access the Gemini Production environment.

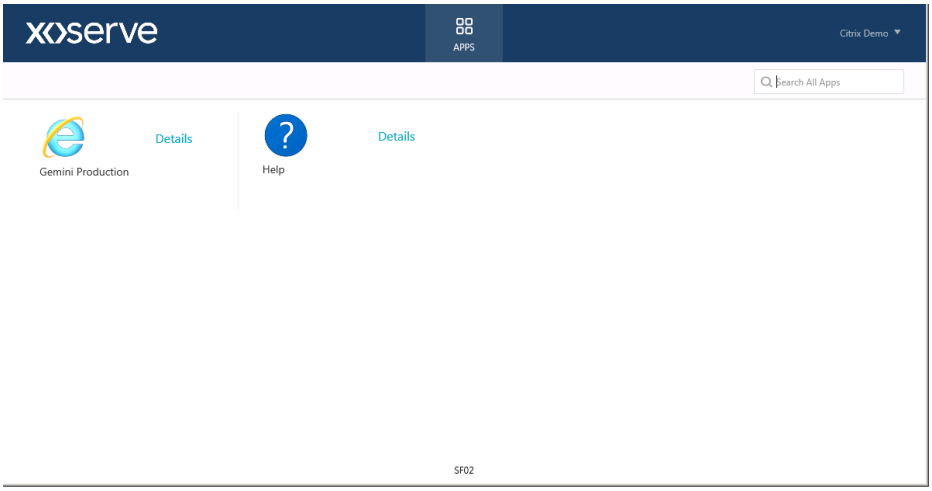


Figure 7 : Citrix homepage

Click the "Gemini Production" icon to access the Gemini Production environment which will open in a different tab in the browser.

3 Disaster Recovery (DR) Arrangements

Xoserve has arrangements in place to provide Gemini services from an alternative location in the event of loss of its primary site. Xoserve will notify external parties if Xoserve chooses to invoke these procedures.

3.1 Citrix DR

- ✓ You will continue to use the same URL for target Citrix Gemini screen service accessed via https://prod-ix-citrix.geminints.com and no changes expected from user end.

3.2 API DR

- ✓ You will continue to use the same FQDN (prod-ix.geminints.com) to access the API even if the Gemini API services are running from the alternative site in case of Disaster Recovery.

All other arrangements (https protocol, routing via the IXN, ports, etc.) are the same as for the Production services.

3.3 Access via XP1

3.3.1 XP1 Tokens

Xoserve supply any User who requests access via XP1 with a security token, logon name and PIN code allowing access to the XP1 Gemini contingency system. This enables Users to continue to access Gemini via an SSL VPN link based on the dual factor authentication. This link is intended to be used by users when their Primary IX link becomes unavailable. Please note that a User's Internet Explorer (IE) setting should allow the user to Install ActiveX control to successfully connect to the XP1 service

A User may only use the XP1 service as a contingency mechanism, subject to the following limits:

- XP1 will always be available on a best endeavour basis other than during planned maintenance.
- Where a User invokes XP1 due to a perceived failure of their main IX system, the User must inform the Transporters of the failure.
- Transporters shall have no liabilities or obligations in respect of XP1 and its use by any UK Link User other than those which are set out in Appendix 3 (UK Link manual).
- There will be no consequential change to any procedure associated with energy balancing.
- If you do not have an XP1 token you should contact the Xoserve Customer Life Cycle team, customerlifecycle.spa@xoserve.com, to request one.

3.3.2 XP1 Link Setup Instructions

Full details of system requirements and step by step instructions for invoking the XP1 link and for accessing the Gemini application over the XP1 link can be found via www.xoserve.com

4 TLS 1.2 support

In order to be compliant with the latest secure communication standards and encryption protocols, the Gemini Citrix solution now supports Transport Layer Security (TLS) protocol version 1.2.

Support for TLS versions 1.0 and 1.1 will be removed by February and March 2021 respectively.

5 Other Settings

5.1 Manually Changing Password

You can also manually change your Citrix login-id password anytime as and when required once you login to the Citrix portal by clicking 'Settings' toolbox. Citrix XenApp Settings portal provides the option to change your Citrix Login Password by clicking Change Password as shown below.

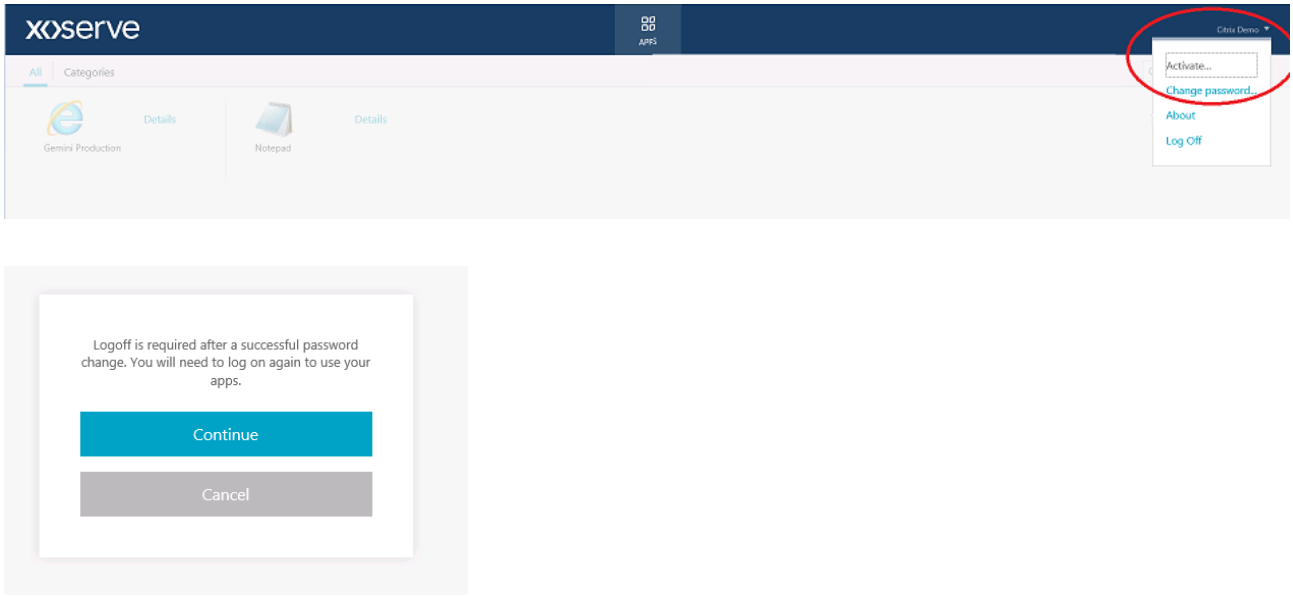


Figure 8: Password change

The following password complexity requirements should be met while setting the password:

- Password should not contain the user's account name or parts of the user's full name that exceed two consecutive characters.
- Minimum password length should be 8 Characters.
- Contains characters from three of the following four categories:
  - English uppercase characters (A through Z)

- English lowercase characters (a through z)
- Base 10 digits (0 through 9)
- Non-alphabetic characters (for example, $, #, %)

Other settings as per the group policy for Citrix users are:

- Minimum password validity - 1 day
- Maximum password validity - 30 days
- Enforce password history - 5 passwords remembered

6 Appendix:

6.1 Prerequisites for Citrix Client Installation

Before you install the Citrix client on your machine, refer to the pre-requisites details attached for Citrix Receiver. Make sure you have met all the requirements mentioned in Citrix website.

6.2 Acronyms

Table 1-Acronyms

Acronym	Description
AD	Active Directory
API	Application Programming Interface
DNS	Domain Naming System
DR	Disaster Recovery
FQDN	Fully Qualified Domain Name
GRP	Gemini Re-platform Programme
HTTPS	Hypertext Transfer Protocol Secure
IE	Internet Explorer
IXN	Information Exchange Network
NIC	Network Interface Card
OS	Operating System
SSL	Secure Socket Layer
SVGA	Super Video Graphics Array
TCS	TATA Consultancy Services
TTD	Test Trail and Development
TLS	Transport Layer Security
UAC	User Access Control
URL	Uniform Resource Locator
VGA	Video Graphics Array

7 Document Control

7.1 Superseded Documents

Version Number	Status	Date	Organisational Unit	Revision Summary
0.1	Draft	13/09/2012	TCS	Created document
1.0	For Review	05/09/2012	TCS	Approved for UKL representation
1.0	For Representation	26/09/2012	TCS	
1.1	For Representation	10/12/2012	TCS	Updated DR Section
2.0	Approved	11/12/2012	TCS	Approved Version
2.1	Approved	05/02/2013	TCS	Updated done post pip testing
2.2	Approved	08/02/2013	TCS	Changed TCS DC to Xoserve DC
2.3	Approved	26/02/2013	TCS	Updated DR IP address

7.2 Version History

Version Number	Status	Date	Organisational Unit	Revision Summary
0.1	Draft	10/7/13	GRP Project Team	Created document
1.0	Approved	19/08/13	Andrew Boyton	Quality Review
2.0	For Review	23/11/2016	Gemini Application Support	Modified after EU Implementation
3.0	Approved	27/03/2017	Gemini Application Support	Document Restructured
3.1	For Review	15/06/2020	GRP Project Team	GRP 2020 updates
3.2	For Approval	23/06/2020	GRP Project Team	GRP 2020 updates
4.0	Approved	24/06/2020	GRP Project Team	GRP 2020 updates
4.1	For Review	14/9/2020	GRP Project Team	TLS version details
4.2	For Approval	15/9/2020	GRP Project Team	TLS version details
5.0	Approved	16/9/2020	GRP Project Team	TLS version details

7.3 Reviewers

Name	Organisational Role	Organisational Unit
Mark Chattin	TechOps Assurance	Xoserve

7.4 Apprvers

Name	Organisational Role	Organisational Unit
Manisha Bhardwaj	Project Manager	Xoserve