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Maintenance and Support Services Handbook

March 2022

1   Introduction & Scope

This Maintenance and Support Services Handbook contains information on the maintenance and support services ("Support") provided in connection with the software products licensed by you ("customer" or "you") from R3 LLC ("R3") pursuant to a separate agreement (the "Underlying Agreement") entered into between you and R3 (such software products the "Licensed Software"). This handbook does not replace or amend in any way the contractual terms and conditions of the Underlying Agreement. Capitalized terms used herein but not otherwise defined shall have the meanings ascribed to them in the Underlying Agreement.

2   Support Schedule

All time definitions are made in accordance with UTC +0.

"Normal Business Hours" are from Sunday 23:00 (GMT) to Friday 23:00 (GMT).

R3 Support uses a 'follow-the-sun' schedule with the Support team based in R3's offices in the following locations: London, New York and Singapore (each an "Office").

"Business Day" means any day except (a) a Saturday or a Sunday, (b) any other day on which commercial banking institutions based in the affected Office's city are authorized or directed by applicable law to close, or (c) any bank holiday in an Office.

3   Support Eligibility

Support is only provided for Incidents in Currently Supported Versions of the Licensed Software, and/or Tasks.

- An "Incident" is a customer problem caused by a malfunction in the Licensed Software where the licensed Software does not operate as stated in the Documentation.

- A "Task" is a request for the Support team to perform or consider an action, or to respond to a question, regarding the Licensed Software and/or its operation, in each case other than with respect to an Incident. Please note that Support does not provide training, consultation or other professional services.

R3 is not in control of how customer's CorDapp manages workload on its and other CorDapp users' hardware and operating systems, and so issues of performance or capacity overload caused by the CorDapp's use of the Licensed Software are explicitly excluded from the definition of "Incident."

Support is provided for the Licensed Software running on the operating systems, database management systems and java versions specified in our online Documentation and depending on the version of Licensed Software.

The applicable 'Platform Support Matrix' can be viewed at:

For Corda Enterprise:
https://docs.r3.com/en/platform/corda/[VERSION]/enterprise/node/deploy/platform-support-matrix.html

For Corda Community: https://docs.r3.com/en/platform/corda/[VERSION]/community/release-platform-support-matrix.html

where "[VERSION]" should be replaced with the minor version of the Licensed Software the customer is running (eg, 4.9).

4   Accessing and Onboarding to Support

4.1 Support Portal and Customer Contacts

R3 uses Atlassian Jira Cloud to record all Support tickets and log all investigations. A web portal ("Support Portal") provides an interface to the Jira Cloud for customers to raise Support tickets. Customer will be provided with a web link to the Support Portal which shall be the primary method for requesting Support.

Prior to requesting Support, customers must provide R3 with one individual-designated customer contact for access to the Support Portal. The full name and email address of the individual should be sent to **support@r3.com** with customer's designated R3 Customer Success manager and/or Account Manager CC'd for authorization. Subsequent changes to the list of customer contacts can be made by raising a Support ticket. A customer contact will have the qualifications set forth in Section 8 (Customer Obligations) below. Support will only be provided to customer contacts, not to any other third parties (including any of customer's affiliates or customers).

When an individual is added to the Support Portal they will receive an invitation via email which will include a link to sign-up and create a password. R3 does not manage nor record Support Portal passwords outside the Jira Cloud System. If an individual loses their password they should recover access to their account by clicking on the 'Forgot Password' link when logging onto the Support Portal.

An email address is also provided that will automatically raise a Support ticket in the Jira Cloud: **support@r3-cev.atlassian.net.** All Support tickets raised using the email address are automatically classified as Severity 3 (S3).

4.2   Customer Data Stored by R3

Within R3's Jira Cloud, customer contacts are stored as individuals grouped into organizations.

Only the organization name and data for each customer contact linked to that organization are stored in the Jira Cloud.

For customer contacts, only the full name and email address, as provided by the individual or the person who nominated that individual, are stored in the Jira Cloud, and are visible to R3 personnel.

Customer should note that, once registered, customer contacts can set up their own Jira profile which includes an avatar graphic and additional information about themselves. This is a feature of the Atlassian Jira Service Desk add-on, not a feature provided by R3. If an individual chooses to customize their profile, the associated data will also be stored in R3's Jira Cloud. Please note, anything added to this profile is not within R3's control.

Support tickets and all information added to Support tickets, including attachments, are stored in the R3 Jira Cloud system in perpetuity. Customers should therefore ensure that no personal data is included within such Support tickets or attachments submitted. Customers must request specific deletion of Support ticket(s) if required.

4.3   R3 Staff Access to Customer Support Data

In an effort to expedite Support request resolution, the Support team has enabled any member of R3 read-only visibility of all Support tickets raised by all customer contacts including all descriptions and comments on those Support tickets. This is so Support tickets can be quickly brought to the attention of different engineering teams, operations teams or even senior management teams during an investigation. However, only members of the Support team can view and modify user and organization data (e.g., add/delete users and organizations) and only the Support team can administer Support tickets and communicate directly with customer over the Support ticket.

5   Maintenance Policy

Maintenance is that category of activities related to released Upgrades to the Licensed Software.

"Upgrades" means improvements and/or fixes to the Licensed Software comprising of New Versions or Patches that R3 makes available for general distribution from time-to-time at no additional charge to its customers who have paid their License Fees.

- "New Version" means a version of the Licensed Software containing Adaptations and Modifications that constitute a significant change or upgrade in Licensed Software's functionality, which may be either a Major New Version of a Minor New Version (as defined below).

- "Adaptations and Modifications" mean, with respect to the Licensed Software, all derivative works thereof, developments therefrom or improvements or enhancements thereto.

"Patch" means an Adaptation and Modification to the Licensed Software intended to correct bugs, problems or errors, or to remove or protect against harmful code, computer viruses, worms, time bombs, logic bombs, Trojan horses, salamis, trap doors, backdoors, undocumented passwords, protect codes or other malicious computer instructions, or any devices or techniques that can, or are designed to, threaten, assault, vandalize, subvert, disrupt, damage, copy, misappropriate, disable or shutdown an IT system, a software program, or any component thereof, including its security or user data; including bug fixes, patches, hot fixes, and other revisions, so that Licensed Software operates without reproducible failure and functions in material conformity with the specifications contained in the Documentation.

A "Patch" can either be a Functional Patch, a Security Patch or an Emergency Patch.

Release Numbering

For the purposes of this handbook:

- "Major New Version" means a whole number in release (ex:4.0)

- "Minor New Version" means a one digit in release (ex: 4.1), and

- "Patch" means a third digit in release (ex: 4.1.1).

Upgrades and Support for Upgrades

The following applies to R3's maintenance policy in general:

- A Major New Version release shall be on earlier than one year from the prior Major New Version release.

- Each Upgrade shall move sequentially through each release without skipping releases. R3 shall have tested each step of customers' upgrade path for New Versions only. Customer is required to install sequential New Versions, e.g. from 4.0. to 4.5 through 4.0 to 4.1, 4.1 to 4.2, 4.2 to 4.3, 4.3 to 4.4 and 4.4 to 4.5.

- As R3 needs to retain flexibility in its ability to introduce breaking changes in a Major New Version release, R3 does not guarantee the ability of a customer to upgrade to a Major New Version release. R3 will always consider the implications of this and will use its reasonable efforts to either reduce breaking changes or provide tooling for a migration when possible.

- Support may not be able to provide a resolution for Incidents reported for New Versions that are not backward compatible.

Patching

The primary activity of maintenance is the patching of earlier New Version releases to provide that such releases:

- Perform as documented ("Functional Patches").

- Do not expose any security threats even if performing as documented ("Security Patches").

- From time to time and at customer's request, it may be necessary to provide an "Emergency Patch" for an ongoing, high-severity Incident to reduce the Incident impact or enable a suitable workaround until a full fix is available in a future Upgrade.

  - In these cases: It may not be possible for an Emergency Patch to be run through the full quality assurance testing suite. The Support team will advise on how much testing R3 was able to perform on the Emergency Patch when it is sent to customer.

  - Depending on the Incident, it may not be possible to provide an Emergency Patch at all.

- Customers must confirm whether an Emergency Patch is fully supported for their intended environment before deploying.

- If customer accepts the Emergency Patch for deployment, it will be applied in a timely fasion.

Deprecation

R3 does not guarantee the availability of any features in future New Version releases. As R3's software products evolve, R3 will revisit features based on their importance to R3's customer base, as well as R3's ability to continue to support them based on the system architecture.

- R3 will give customer sufficient notice of any features that will be removed by indicating a feature is deprecated in the release notes of a New Version.
- R3 will allow a minimum of 12 months until the feature is removed giving sufficient time for customer to migrate from the API or feature, provided R3 may not include such feature in the following Major New Version release even if such release is less than 12 months from such date.

Backward Compatibility

- R3 will provide that a CorDapp can run on a Major New Version through all releases within such Major New Version.

- Major New Versions may not be backward compatible with earlier New Versions of Licensed Software. Accordingly, CorDapps using Licensed Software may not operate with Major New Versions of Licensed Software. R3 will work to facilitate upgrades of Major New Versions with tooling where possible.

- Any schemas related to Corda system tables (i.e., non CorDapp) are upgradable to a future Major New Version release.

Feature Back-Porting

- Due to the constraints of a capability's likely dependency on other components of the system, R3 will not implement features to an earlier release of a product ('back-porting').

6   Incident Severity Levels

Incident severity level will first be proposed by customer, provided that R3, in discussion with customer, will make the final determination as to the appropriate severity level in accordance with the following:

6.1 Classifications

Severity 1 (S1): Critical Impact. An emergency situation caused by an Incident which critically impairs customer's business until it is rectified or a workaround is in place. Such Incidents are typically characterized by the loss of entire CorDapp systems, infrastructure components or data sets and will cause material financial, reputational, compliance, or customer service impact (or significant increase in risk of impact) if not resolved quickly. Severity 1 applies strictly to a production environment.

Severity 2 (S2): Significant Impact. A detrimental situation caused by an Incident in which the CorDapp performance degrades substantially under reasonable loads; or key functionalities of the CorDapp are not accessible without manual workarounds, thereby causing a significant impact on business operations. Severity 2 applies strictly to a production environment.

Severity 3 (S3): Moderate impact. The CorDapp is impaired caused by an Incident, but still maintains its key functionalities. The component impacted is not critical to the CorDapp, thereby causing little or no significant having limited impact on business operations.

Severity 4 (S4): Minimal Impact. A noticeable situation, caused by an Incident, in which use of the CorDapp is affected in some cosmetic or ergonomic way and has minimal impact causing no significant impact on business operations, or an issue which is reasonably correctable by a Documentation change or by a future, regular release from R3.

6.2 Target Response Levels

Once the Support request has been submitted to our Support Portal, R3 shall use commercially reasonable efforts to respond in accordance with the applicable Support Subscription Levels, which can be found here: www.r3.com/support-services/.

7 Exclusions; Excused Failures

7.1 Exclusions

Support does not include provision of new or separate products, or major features, which R3 offers for an additional fee to its customers generally.

Support does not include customized or bespoke modifications created by R3 for a single third party or group of third parties.

No on-site Support will be provided.

Support will not be provided with respect to any software other than the Licensed Software, and will not be provided with respect to Incidents caused by or incurred in connection with an unauthorized or unspecified use of the Licensed Software.

Support will not include general training on use of the Licensed Software.

Support will not be provided with respect to errors caused by any reason external to the Licensed Software, including failure or fluctuation of electrical supplies, inadequate cooling, or equipment.

7.2 Excused Failures

Failure to meet any service level will be excused to the extent the following circumstances are present:

1. The failure of, or problems relating to, network services, connections, software, firmware or equipment not under the control of R3;

2. Actions or inactions of customer, CorDapp user, or third-party vendor thereto (other than R3 and its subcontractors);

3. Misuse of the Licensed Software, or use or installation of the Licensed Software other than as permitted in the relevant license or the Documentation;

4. Failure of customer to meet any of its obligations set forth herein;
5. Any action of any Governmental Authority which prevents R3 from providing Support; or

6. Any Force Majeure Event (as defined in the Underlying Agreement), as long as R3 complies with reasonable disaster recovery procedures and provides to customer at

least the same level of service during such Force Majeure Event as provided to other customers.

8 Customer Obligations

Customer is responsible for the obligations set out below and acknowledges that the commitments provided by R3 are dependent on the performance of those obligations.

- Provide R3 with adequate and timely information and cooperation to facilitate the efficient provision of Support.

- Provide R3 with one or more designated customer contacts who will be responsible for engaging Support by contacting R3 via designated methods using pre-authorized credentials. Where customer requires multiple customer contacts, please first open a dialogue with R3 to agree on an appropriate number of customer contacts. Individuals who are not designated customer contracts are not permitted to request Support.

- Ensure that customer contacts are suitably qualified and experienced, and are familiar with the Licensed Software, and provided further:

When the Support request is development related, customer contacts will be:

  - Enabled with access to customer's relevant source code and an environment suitable for re-creating the reported issue;

  - Competent with the Licensed Software API;

  - Competent in the development language and environment used by their CorDapp; and

  - Able to understand, and can describe in detail, how their CorDapp works and interacts with Licensed Software.

When the request for Support is operational, customer contacts will be:

  - Enabled with enough access to the relevant operating environment to carry out process diagnostics and retrieve Licensed Software log and configuration files as necessary;

  - Competent with the operating system running Corda nodes;

  - Competent with running JVM-based software and familiar with the way JVM-based software executes;

- Competent with any network and performance diagnostic tools considered standard for the applicable operating system; and

- Comfortable with working through diagnostic procedures as described by the Support team.

- Provide access to required diagnostic information such as log files, configuration files, crash dumps, etc.

- Provide that the operating environment meets the minimum technical requirements for the Licensed Software and the Licensed Software has been properly installed, as set forth in the Documentation.

8.1 Access to Customer Source Code

To the extent possible, and as requested by R3, customer may be required to provide R3 or its authorized technical representative access to its source code in order to diagnose an Incident or otherwise provide Support. Customer acknowledges that if access is not provided as requested by R3, response times, Incident determination and Incident resolution may be slower, impaired or impossible. R3 will treat all source code as confidential and use such code solely to the extent necessary to provide Support and will not share it with, or transfer it in any manner to, anyone outside of R3's firm. R3 will also take reasonable steps to ensure only engineers designated to investigate customer's Incident or provide Support to customer's requests are given access to customer's source code. R3 will not, under any circumstances, access or take action within customer's own environments but may provide guidance, advice, workaround suggestions or code fixes to customer's own support personnel who do have such access and rights. After an Incident has been closed, and subject to customer's written request, R3 will destroy any copies of uploaded source code and, upon request, will certify to such destruction.

8.2 Remedial and Diagnosstic Actions Requested by R3

From time to time R3 may request that customer contacts carry out procedures or changes to source or configuration to establish a diagnosis or test a potential fix. These procedures and changes may be destructive in nature or have unexpected adverse effects, and while the Support team will take every reasonable effort to advise of any impact, it is the customer contacts' responsibility to apply due-diligence and ensure they are complying with their organization's change and backup policies.

9   Final Disclaimers

R3 does not warrant that its products, including the Licensed Software, are defect free, however it does endeavor to fix them to work as designed.

R3 is not responsible for any customer Personal Data stored or otherwise used with any of R3's proprietary software or on any network provided by R3.