

DISASTER RECOVERY SERVICES AND CUSTOMER INVOKED FAILOVER SERVICES SERVICE DESCRIPTION DOCUMENTATION

災難復原服務和客戶呼叫的容錯移轉服務服務說明文件

The following services apply to Customers that have purchased these optional services, to the extent available, in connection with its subscription to SAP HANA Enterprise Cloud services, S/4HANA Cloud extended edition, SAP ERP, private cloud edition, RISE with S/4HANA Cloud, private edition, SAP ERP, private cloud edition, tailored option, or RISE with S/4HANA Cloud, private edition, tailored option under an applicable Order Form.

下列服務適用於依適用訂購單在可用範圍內購買了與其 SAP HANA Enterprise Cloud 服務、S/4HANA Cloud (延伸版)、SAP ERP (私人雲端版)、RISE with S/4HANA Cloud (私人版)、SAP ERP (私人雲端版，專用選項) 或 RISE with S/4HANA Cloud (私人版，專用選項) 訂閱相關的該等選購服務之客戶。

1. DISASTER RECOVERY SERVICES

災難復原服務

1.1. Definitions

名詞定義

Definitions used but not defined in this Service Description shall have the meaning ascribed to them in the agreement under which Customer purchased the services.

在本服務說明中使用但未定義之名詞定義，應依客戶訂購服務之合約對其所賦予之含義。

“**Disaster**” means an event of substantial extent causing significant disruption of the delivery of the Cloud Services and may include physical damage or destruction, to the SAP data center or Computing Environment. Disasters can be natural disasters (such as floods, hurricanes, tornadoes or earthquakes) and/or human-induced disasters (including hazardous material spills, infrastructure failure, and bio- terrorism). A Disaster is typically not limited to one individual system or landscape but larger parts of an infrastructure.

「**災難**」係指造成雲端服務交付嚴重中斷的重大事件，可能包括對 SAP 資料中心或計算環境造成實體損壞或破壞。可以是自然災難 (例如，洪水、颶風、龍捲風或地震等) 及/或人為災難 (包括，危險物品散落、基礎設施故障和生化恐怖主義)。災難通常不限於基礎設施的單個系統或架構，而為較大部分。

“**Disaster Recovery Services**” (or “**DR Services**” or “**DR**”) means the disaster recovery service, process, policies and procedures initiated by SAP that are related to preparing for recovery or continuation of technology or infrastructure identified in the applicable Order Form as included in the DR Services. DR is not a process to overcome outages of isolated systems due to hardware or software incidents (i.e., DR is not a substitute or replacement for System Availability Service Levels).



「**災難復原服務**」(或稱「**DR 服務**」或「**DR**」) 係指由 SAP 所啟動為復原或延續 DR 服務內適用訂購單明列之技術或基礎設施，所準備之相關災難復原服務、程序、政策和流程。DR 並非克服因硬體或軟體事件造成獨立系統中斷的程序 (亦即，DR 並不是系統可用性服務層級的替代或取代服務)。



“Short Distance DR” or “Metro DR” means a Disaster Recovery Service in which SAP uses synchronous replication (if possible) between primary and failover systems. This typically means that the secondary data center is less than 50 to 80km away from the primary data center, providing lower cost and smaller RPO but more risk regarding a local disaster impacting both data centers.¹

「短距離 DR」或「都會 DR」係指 SAP 在主要系統和容錯移轉系統之間使用同步複製 (可能的話) 的災難復原服務。這通常表示次要資料中心到主要資料中心的距離低於 50 到 80 公里，可提供更低的成本和更小的 RPO，但在影響兩個資料中心的本地災難方面風險較大。¹

“Long Distance DR” or “Regional DR” means a Disaster Recovery Service in which SAP uses asynchronous replication only between primary and failover systems. This typically means that the secondary data center is over 50 to 80km away from the primary data center, to minimize risk of a local disaster affecting both data centers.¹

「長距離 DR」或「區域 DR」係指 SAP 僅在主要系統和容錯移轉系統之間使用非同步複製的災難復原服務。這通常表示次要資料中心到主要資料中心的距離超過 50 到 80 公里，將影響兩個資料中心的本地災難風險降至最低。¹

“RPO” (or “Recovery Point Objective”) means the maximum period in which Customer data may be lost due to a Disaster (i.e. time between last backup or last data replication and point in time a Disaster occurred). RPO mainly depends on the replication mechanism between primary and failover systems. Synchronous replication results in RPO=0 but is only applicable for Short Distance DR. Asynchronous replication, typically for Long Distance DR, will result in RPO=30 minutes.

「RPO」(或「恢復點目標」) 係指客戶資料可能因災難而遺失所處之最長期間 (例如，上次備份或資料複製和災難發生時間點之間的時間)。RPO 主要取決於主要系統和容錯移轉系統之間的複製機制。同步複製會產生 RPO=0，但僅適用於短距離 DR。非同步複製將產生 RPO=30 分鐘，通常適用於長距離 DR。

“RTO” (or “Recovery Time Objective”) means the duration of time in which the PRD is unavailable in the event of a Disaster (i.e. time between a Disaster and point in time the systems are available again).

「RTO」(或「恢復時間目標」) 係指 PRD 在災難事件中無法使用的期間 (亦即，災難發生時點和系統恢復使用時點之間的時間)。

- 1.2. If purchased by Customer, SAP will provide Disaster Recovery Services as outlined herein for PRD systems, and for HEC Services and Tailored Option Services, specifically for those PRD systems indicated in the System Set-Up Table of Customer's Order Form. SAP's provisions of the DR Services are contingent upon Customer fulfilling certain prerequisites and conditions. SAP shall be excused from its DR Services obligations to the extent (and for the duration during which) Customer fails to fulfill any of the following pre-requisites and such failure prevents SAP from performing the applicable DR Services:

若客戶購買，SAP 將為 PRD 系統、HEC 服務和專用選項服務提供本文件中所述之災難復原服務，特別是針對客戶訂購單的系統設定表中指明的該等 PRD 系統。SAP 對 DR 服務的提供係取決於客戶是否達成特定先決條件和條件。在客戶未達成下列任何先決條件的範圍內 (且於持續時間內)，且此等未達成妨礙 SAP 執行適當的 DR 服務，SAP 應免於履行其相關 DR 服務義務：

- 1.2.1. The applicable components are technically used as provided by SAP; any custom or third party developments or modifications affecting applicable components are not covered (excluding development/modifications done in ABAP only systems using SAP ABAP standard development tools, and excluding any third party products embedded in the SAP software).

在技術上按照 SAP 規定使用適當元件；任何影響適當元件的自定義或第三方開發或修改不在 DR 服務範圍內 (但使用 SAP ABAP 標準開發工具在 ABAP 系統完成的開發和修改不在此限，且 SAP 軟體內嵌之任何第三方產品亦不在此限)。

¹ Unless otherwise indicated herein, the distances/regions and conditions can be different if a hyperscale service such as Amazon Web Services, Microsoft Azure or Google Cloud is used to provision the Cloud Service. See <https://aws.amazon.com/compliance/data-center/data-centers/>, <https://azure.microsoft.com/global-infrastructure> or <https://cloud.google.com/compute/docs/regions-zones/> for additional information.

¹ 除非本文中另有規定，若使用超大規模服務 (例如 Amazon Web Services、Microsoft Azure 或 Google Cloud) 來提供雲端服務，則距離/區域和條件可能會有所不同。請參閱 <https://aws.amazon.com/compliance/data-center/data-centers/>、<https://azure.microsoft.com/global-infrastructure> 或 <https://cloud.google.com/compute/docs/regions-zones/> 取得額外資訊。

- 1.2.2. The applicable systems stay within boundaries regarding size and layout as set forth in the Agreement.
應用系統的規模和佈局應維持在本合約規定的界限內。
- 1.2.3. Interfaces in DR scope are limited to interfaces/protocols supported by SAP systems out of the box (e. g. RFC, web service calls, Flat Files, XML and IDocs) for components located in the data center. Any interfaces that require additional solutions or components within the Computing Environment, as well as external connectivity, are outside of the DR Services scope.
就資料中心內的元件而言，DR 範圍的介面限於 SAP 系統原本即支援的介面/協定 (例如，RFC、Web 服務呼叫、Flat File、XML 和 IDocs)。要求在計算環境內額外加入解決方案或元件的任何介面，以及任何外部連接介面，均不在 DR 服務範圍內。
- 1.2.4. All repositories containing Customer Data that need to be replicated to the DR site are databases; otherwise, RPO times can be substantially longer, thus does not fall under the definition of standard DR Services.
包含必須複製到 DR 站點客戶資料的所有儲存機制均為資料庫；否則，RPO 時間將大幅延長，因而不符合標準 DR 服務的定義。
- 1.3. For HEC Services and Tailored Option Services, the DR Services RTO/RPO options are set forth in the table below. Generally, the standard RTO is 12 hours, but RTO of 4 hours may be available for defined scenarios if agreed by the parties in the Order Form. For HEC Services and Tailored Option Services, the DR Services option purchased for the respective components is stated in the relevant column of the System Set-Up Table in the Order Form via the applicable designation set forth in the table below.
針對 HEC 服務和專用選項服務，DR 服務 RTO/RPO 選項如下表所示。通常，標準 RTO 為 12 小時，但若雙方當事人於訂購單中議定，則可針對所定義之情境提供 4 小時的 RTO。針對 HEC 服務和專用選項服務，為個別元件購買的 DR 服務選項會透過下表中列出的適用名稱在訂購單的系統設定表相關欄中進行說明。

DR designation in Order Form 訂購單中的 DR 名稱	RTO RTO	RPO RPO
Blank	none	none
空白	無	無
DR_12h_30	12h	30 min
DR_12h_30	12 小時	30 分鐘
DR_4h_30	4h	30 min
DR_4h_30	4 小時	30 分鐘
DR_12h_0	12h	0 min
DR_12h_0	12 小時	0 分鐘
DR_4h_0	4h	0 min
DR_4h_0	4 小時	0 分鐘

If Customer purchased DR Services based on Long Distance and Short Distance designations, please see Section 1.8 below.

若客戶根據長距離和短距離名稱購買 DR 服務，請參閱下面第 1.8 條。

- 1.4. If Customer has purchased the optional Disaster Recovery services for RISE with S/4HANA Cloud, private edition, SAP ERP, private cloud edition, or S/4HANA Cloud, extended edition, the RTO is 12 hours and RPO is 30 minutes for Long Distance DR and for Short Distance DR, the RTO is 12 hours and the RPO is 0 minutes. For Google Cloud and Microsoft Azure, Short Distance DR is only available in selected regions. If Customer has purchased the optional SAP S/4HANA Cloud, 4 hour recovery time objective, private edition or SAP ERP, 4 hour recovery time objective, private cloud edition, the RTO is 4 hours (instead of 12 hours) and the RPO remains unchanged as indicated in this section.

若客戶已針對 RISE with S/4HANA Cloud (私人版)、SAP ERP (私人雲端版) 或 S/4HANA Cloud (延伸版) 購買選

購的災難復原服務，則長距離 DR 的 RTO 為 12 小時而 RPO 為 30 分鐘，短距離 DR 的 RTO 為 12 小時而 RPO 為 0 分鐘。若為 Google Cloud 和 Microsoft Azure，短距離 DR 僅適用於選定的區域。若客戶購買了選購的 SAP S/4HANA Cloud，4 小時復原時間目標 (私人版) 或 SAP ERP，4 小時復原時間目標 (私人雲端版)，則 RTO 為 4 小時 (而不是 12 小時) 且 RPO 保持不變，如本條文所述。

- 1.5. Performance characteristics and System Availability may be reduced while operating under DR Services failover (the System Availability Service Level will not be lower than 95%).

執行 DR 服務的容錯移轉時，效能特性和系統可用性可能降低 (系統可用性服務層級將不會低於 95%)。

- 1.6. **Other DR services are not in the scope of SAP's standard DR Services.** For HEC Services and Tailored Option Services, if requested by the Customer, such additional DR Services ("Additional DR Services") would need to go through a further DR assessment based on Customer architecture and requirements. Details on the implementation of any such Additional DR Services would be agreed upon with Customer, including revised estimated failover times and maximum data loss, and the parties would mutually agree to the applicable RPO and RTO for such Additional DR Services as result of the implementation in a Change Request or an amendment to the Order Form. As part of this process, SAP would use reasonable efforts to bring RPO/RTO for the System Setup as defined in the Order Form in a similar range as for the defined packages. These Additional DR Services are not available for S/4HANA Cloud, extended edition, SAP ERP, private cloud edition, and RISE with S/4HANA Cloud, private edition.

其他不屬於 SAP 標準 DR 服務範圍之 DR 服務。 針對 HEC 服務和專用選項服務，若客戶要求額外的 DR 服務 (以下稱「額外 DR 服務」)，必須基於客戶系統架構和需求執行進一步的 DR 評估。該額外 DR 服務的實施細則將與客戶商議，其中包括調整預估的容錯移轉時間、資料遺失的最大容許量，且雙方將就該額外 DR 服務約定適當的 RPO 和 RTO，作為該變更請求或訂購單修訂內容的實施細則。本程序中，SAP 將盡合理努力在類似定義套件範圍內，採用如訂購單定義系統設定的 RPO/RTO。該等額外 DR 服務不適用於 S/4HANA Cloud (延伸版)、SAP ERP (私人雲端版) 和 RISE with S/4HANA Cloud (私人版)。

- 1.7. **Regular DR Testing.** SAP offers one annual DR failover-test as part of the DR Services to test the DR Services. SAP shall promptly re-perform any DR recovery tests that fail to achieve the applicable standards and report any failures to Customer. For DR Services readiness, Customer will fulfill its infrastructure and business preparation as set forth in the Order Form, and as may be further mutually agreed between the parties in a Change Request or amendment to the Order Form. Customer business continuity objectives may require additional Customer efforts in addition to and beyond the scope of the Cloud Services and/or DR Services hereunder. Each Disaster Recovery Service implementation requires Customer's testing and causes additional Agreed Downtimes. The System Availability calculation for the affected month(s) shall exclude these additional Agreed Downtimes.

定期 DR 測試。 SAP 的 DR 服務項目中，每年提供一次 DR 容錯移轉測試，以檢測 DR 服務。任何 DR 復原測試若未達適當標準，SAP 應及時重新執行測試並向客戶報告失敗原因。客戶對 DR 服務的準備，應根據訂購單完成其基礎架構和業務準備，以及雙方在變更請求或訂購單修訂內容中的其他約定事項。在本合約雲端服務和/或 DR 的服務範圍外，客戶的業務持續性目標可能需要客戶進行額外的任務。每項災難復原服務實作皆必須由客戶執行測試，且會導致出現其他「商定的停機時間」。針對受影響月份的系統可用性計算，應排除這些額外的「商定的停機時間」。

- 1.8. For DR Services purchased based on Short Distance and Long Distance options:

針對根據短距離和長距離選項購買的 DR 服務：

The relevant parameters depend on the chosen DR layout (Short Distance DR/ Long Distance DR)*, the database platform used, and the adherence to above listed conditions for standard DR Services. The predefined parameters for these standard DR Services are set forth below.

相關的參數取決於所選擇的 DR 佈局 (短距離 DR/長距離 DR)*、使用的資料庫平台，以及是否遵循上述標準 DR 服務的條件。這些標準 DR 服務的預先定義參數如下所述。

*For S/4HANA Cloud, extended edition, the DR layout is Long Distance DR unless Long Distance DR is not available in the region of the applicable data center. In such event, Short Distance DR will be provided.

*針對 S/4HANA Cloud (延伸版)，DR 佈局是長距離 DR，但若長距離 DR 在相關資料中心的區域內無法提供使用則除外。在此種情況下將提供短距離 DR。

	Short Distance DR (Metro DR) 短距離 DR (都會 DR)	Long Distance DR (Regional DR) 長距離 DR (區域 DR)
Database: SAP HANA	Single Node (1): RTO=12hrs; RPO=30mins Multi Node (2): RTO=12hrs; ; RPO=0hrs	RTO=12hrs; RPO=30mins
資料庫：SAP HANA	單一節點 (1)：RTO=12 小時； RPO=30 分鐘 多重節點 (2)：RTO=12 小時； RPO=0 小時	RTO=12 小時；RPO=30 分鐘
Database: Sybase ASE	RTO=12hrs; RPO=30mins (3)	RTO=12hrs; RPO=30mins
資料庫：Sybase ASE	RTO=12 小時；RPO=30 分鐘 (3)	RTO=12 小時；RPO=30 分鐘

(1) HANA Single Node: describes a configuration, where the HANA database system resides on one single server node.

(1) HANA 單一節點：說明 HANA 資料庫系統常駐在某一個單一伺服器節點上的組態。

(2) HANA Multi Node (or HANA Scale Out System): describes a HANA database system that is installed on more than one host but identified by a single system ID (SID). It is perceived as one unit from the perspective of the administrator, who can install, update, start up, shut down, or backup the system as a whole.

(2) HANA 多重節點 (或 HANA 橫向擴展系統)：說明 HANA 伺服器系統安裝在一個以上的主機上但由單一系統 ID (SID) 識別的組態。系統對管理員來說為單一裝置，管理員可將系統視為一個整體來進行安裝、更新、啟動、關機或備份。

(3) Sybase ASE database replication is currently not supported in continuous mode, which would be the prerequisite for an RPO of 0. If such feature becomes available and the respective systems are updated to that new version and successfully tested, both parties will at that time agree on a modified RPO of 0 hours via a Change Request or amendment to Order Form without additional service charge.

(3) Sybase ASE 資料庫目前不支援連續複製模式，該模式的前提為 RPO 為 0。若可提供該功能且相關系統亦升級新版本並測試成功，雙方屆時可藉由變更請求或訂購單修訂內容約定修改 RPO 為 0 小時，無需額外服務費。

1.9. Disaster Recovery Services for SAP Content Server.

SAP 內容伺服器災難復原服務。

DR Services for SAP Content Server ("CSDR") is an optional service available only for HEC Services and Tailored Option Services only. If purchased by Customer, SAP will provide DR Services for SAP Content Server with an RTO of 12 hours and an RPO of 90 minutes. CSDR is stated in the relevant column of the System Set-Up Table in the Order Form using the CSDR designation DR_12h_90.

SAP 內容伺服器 DR 服務 (以下稱「CSDR」) 是一項選購服務，僅適用於 HEC 服務和專用選項服務。若客戶購買，SAP 將針對 SAP 內容伺服器提供 DR 服務，RTO 為 12 小時而 RPO 為 90 分鐘。CSDR 在訂購單中系統設定表的相關欄中使用 CSDR 名稱 DR_12h_90 加以說明。

For DR Services purchased based on Short Distance and Long Distance options:

針對根據短距離和長距離選項購買的 DR 服務：

	Short Distance DR (Metro DR) 短距離 DR (都會 DR)	Long Distance DR (Regional DR) 長距離 DR (區域 DR)
Database: SAP MaxDB ⁽¹⁾	RTO=12hours; RPO=90mins	RTO=12hours; RPO=90mins
資料庫：SAP MaxDB ⁽¹⁾	RTO=12 小時；RPO=90 分鐘	RTO=12 小時；RPO=90 分鐘

⁽¹⁾ SAP Content Server is only available with the SAP MaxDB database.

⁽¹⁾ SAP 內容伺服器僅適用於 SAP MaxDB 資料庫。

2. **OPTIONAL CUSTOMER INVOKED FAILOVER (“CIF”) SERVICES FOR HEC SERVICES AND TAILORED OPTION SERVICES**

適用於 HEC 服務和專用選項服務之選購客戶呼叫的容錯移轉 (以下稱「CIF」) 服務

CIF services is an optional service available only for HEC Services and Tailored Option Services which can be agreed between SAP and Customer for certain components as set forth in the System Set-Up Table of the Order Form in addition to DR Services (DR Services is a pre-requisite for CIF services). For components for which Customer purchases CIF services, Customer may initiate the failover/failback between the primary data center and secondary data center (normally used for DR Services) without the occurrence of a Disaster.

CIF 服務是選購服務，僅適用於 HEC 服務和專用選項服務，除 DR 服務 (DR 服務是 CIF 服務的先決條件) 之外，SAP 和客戶可以就訂購單的系統設定表中規定的特定元件進行議定。對於客戶為其購買 CIF 服務的元件，客戶可以在主要資料中心和次要資料中心 (通常用於 DR 服務) 之間啟動容錯移轉/容錯回復，而不會發生災難。

The respective components for which CIF services is purchased will be marked with the “CIF” designation appended to the DR designation in the System Set-up Table. By way of example, a CIF services designation of “DR_12h_0_CIF” means that Customer may invoke CIF services without the occurrence of a Disaster for that component and for which the agreed upon DR Services has an RTO of 12 hours and an RPO of 0 minutes.

已購買 CIF 服務的各個元件將使用「CIF」名稱標記，附加在系統設定表中的 DR 名稱之後。例如，「DR_12h_0_CIF」的 CIF 服務名稱表示客戶可以呼叫 CIF 服務而不會發生該元件的災難，並且議定執行 DR 服務的 RTO 為 12 小時，RPO 為 0 分鐘。

CIF services is only available for select configurations and data centers. Pre-requisites, technical requirements and scenarios for which CIF services can apply depend on the concrete technical solution for the DR Services and are described in additional documentation.

CIF 服務僅適用於特定組態和資料中心。CIF 服務可以適用的先決條件、技術要求和情境取決於 DR 服務的具體技術解決方案，並在額外文件中加以描述。

For clarity, performance characteristics and System Availability may be reduced while operating under CIF services (the System Availability Service Level will not be lower than 95%).

為免除疑義，執行 CIF 服務時，效能特性和系統可用性可能降低 (系統可用性服務層級將不會低於 95%)。