

# IT: Disaster Recovery definitions

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It is important to understand the difference between the Recovery Time Objective and the Recovery Point Objective.

## RTO and MTD/MTPD/MTPOD

The RTO is determined based on the acceptable downtime in case of a disruption of operations. It indicates the earliest point in time at which the business operations must resume their IT processing capacity after disaster.<sup>1</sup>

According to [ISO 22301 :2012(E)], §3.45 Terms and Definitions, page 14, "**RTO** : period of time following an incident within which : product or service must be resumed or activity must be resumed, or resources must be recovered".

According to [ISO 22301 :2012(E)] §3.26 Terms and Definitions, page 12, "**MTPD** : maximum tolerable period of disruption : "time it would take for adverse impacts, which might arise as a result of not providing a product/service or performing an activity, to become unacceptable. See also "maximum acceptable outage".

According to NIST 800-34r1<sup>2</sup> Maximum Tolerable Downtime (MTD) represents the total amount of time the system owner/authorizing official is willing to accept for a mission/business process outage or disruption and includes all impact considerations. RTO defines the maximum amount of time that a system resource can remain unavailable before there is an unacceptable impact on other system resources, supported mission/business processes, and the MTD.

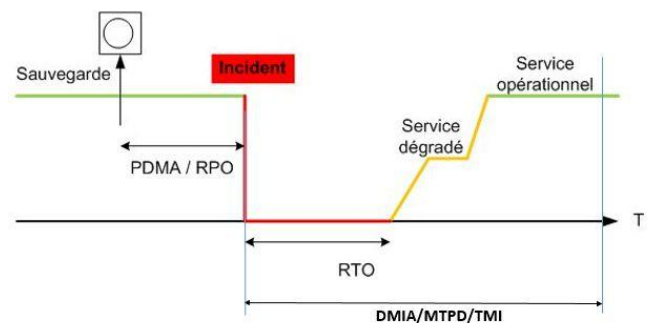
## RPO

The RPO is determined based on the acceptable data loss in case of disruptions of operations. It indicates the oldest "age" of the recovered data, i.e., to which point in time related to disruption moment the recovered data must correspond.

An exemple of interesting schema representation of RPO, RTO and MTx variants is<sup>3</sup>.

[Français] On parle d' **Objectif de Temps de Reprise (OTR/RTO)**; **Temps maximal d'interruption (TMI)**; **Durée d'Interruption Maximum Admissible (DIMA/DMIA/MTPD)**; **Objectif de point de reprise (PRO/RPO)**. La DIMA ou DMIA est la période au-delà de laquelle les impacts de la non reprise des activités deviennent inacceptables (ISO 22301). Le PRO est la perte d'information qu'une organisation peut tolérer.

## Schema



Source (with update!) :  
Wikipedia France : [https://fr.wikipedia.org/wiki/Dur%C3%A9e\\_maximale\\_d%27interruption\\_admissible#/media/File:RTO\\_RPO.gif](https://fr.wikipedia.org/wiki/Dur%C3%A9e_maximale_d%27interruption_admissible#/media/File:RTO_RPO.gif)

1. CISA Review Manual 2015 p. 234  
2. <http://nvlpubs.nist.gov/nistpubs/Legacy/SP/nistspecialpublication800-34r1.pdf>

3. [http://www.bcmpedia.org/w/images/thumb/8/83/Recovery\\_Objectives\\_RTO\\_RPO\\_and\\_MTPD.png/500px-Recovery\\_Objectives\\_RTO\\_RPO\\_and\\_MTPD.png](http://www.bcmpedia.org/w/images/thumb/8/83/Recovery_Objectives_RTO_RPO_and_MTPD.png/500px-Recovery_Objectives_RTO_RPO_and_MTPD.png)