

iOra EDGE

REPLICATION STATUS to IN-DEPTH TROUBLESHOOTING

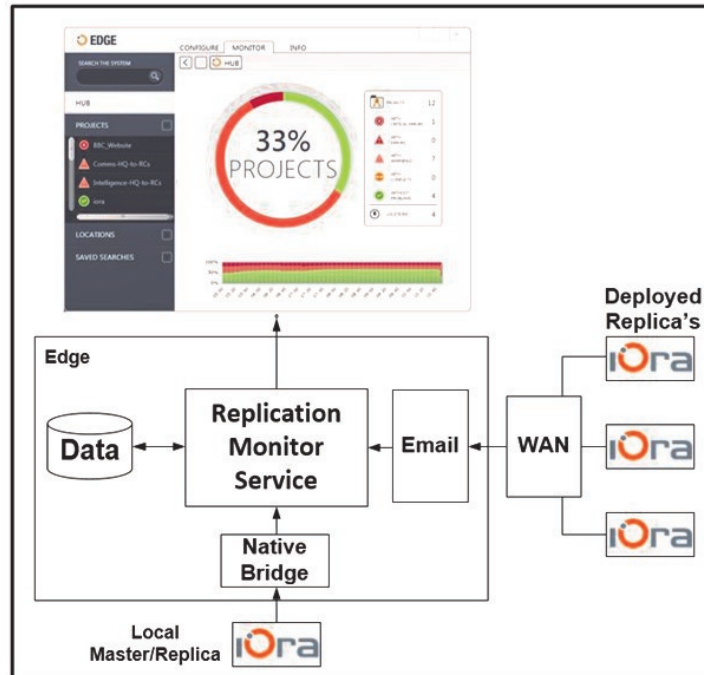
The Edge user interface can be used by anyone to determine the status of deployed replication. A drill down capability is available for technical engineers to directly support deployment troubleshooting activities.

REMOTE ENVIRONMENT ENABLED

Edge is deployable in remote environments (alongside iOra Geo-Replicator), often disconnected from the network and with challenging bandwidth. Replication status updates are communicated as part of email messaging that can be highly resilient to any form of network disruption.

WARNINGS, ERRORS AND CONFLICTS

Monitoring the core operations of both the iOra Publisher and Client is central to Edge. The user interface automatically flags issues against each iOra publication so that operators can then drill-down and resolve any problems.



iOra Edge high level architecture

iOra Edge has been designed from the ground up to support the deployment of iOra replication systems to users in the most remote and hostile environments, where access to networks cannot be guaranteed and, when available, are either high latency and or low in bandwidth.

Edge is comprised of several components:

Replication Dashboard - that dynamically tracks replication metrics across all locations and replication projects, displaying both quick-to-understand status views and in-depth technical views.

Monitoring Service – that continually tracks the status of all iOra replication across all connected replicas and provides the ability to raise potential

iOra Edge replication monitoring provides a tool for reporting the health and status of iOra Geo-Replicator replication systems, and monitors both local and remote deployments.

issues regarding the overall replication system.

Integration API – that supports the integration of replication status and parameters into third-party monitoring interfaces and applications.

SQL Storage hub - A back-end SQL database service to store Edge replication data for display in the Edge UI and for possible later analysis.

Email Status updates - An efficient email data communication service to transfer Edge replication event data to a centralised point.

Internal Communication - A communication bridge between the existing Geo-Replicator Publisher and Client components and the iOra Edge database.

Using iOra Edge

The Edge User Interface provides a visual display of the health and status of all monitored replication systems. Replication health is displayed at a high-level and technical statuses may then be found by drilling down into the data.

The User Interface groups replication systems into Projects and Locations.



Projects consist of:



The *published* master publication, as managed by a Geo-Replicator Publisher installation;



The *subscribed* instances of the master publication, as installed at various Geo-Replicator;



For Server-to-Server SharePoint replication, the *published* replica publication(s), as managed by further Geo-Replicator Publisher installation(s).



For Server-to-Server SharePoint replication, the *subscribed* instance of each replica publication(s), as installed back at the master Geo-Replicator Client installation.



Locations represent individual installations of the Geo-Replicator Client and/or Publisher plus the iOra Edge Bridge feature.

They consist of:

- Any *published* publications managed by the local Geo-Replicator Publisher installation.
- Any *subscribed* publications installed to the local Geo-Replicator Client installation.

Published and subscribed instances of each publication are displayed separately within each Project and Location in order to show their individual health and status. Projects and Locations are therefore separate ways of displaying common information from different viewpoints.

Publication Warning States

Publications may be in one of various different states, in descending order of importance:



Critical Error – the publication has a serious problem and is not working correctly. Remedial action is required.



Error – the publication has an error and is not working correctly. The error may be temporary, but investigation and remedial action is recommended.



Warning – the publication has a problem which is not preventing replication but should be investigated and corrected as soon as practical.



Document Conflict – data replicated as part of a server to server publication has conflicted with a change to the equivalent data when applied to the SharePoint target server.

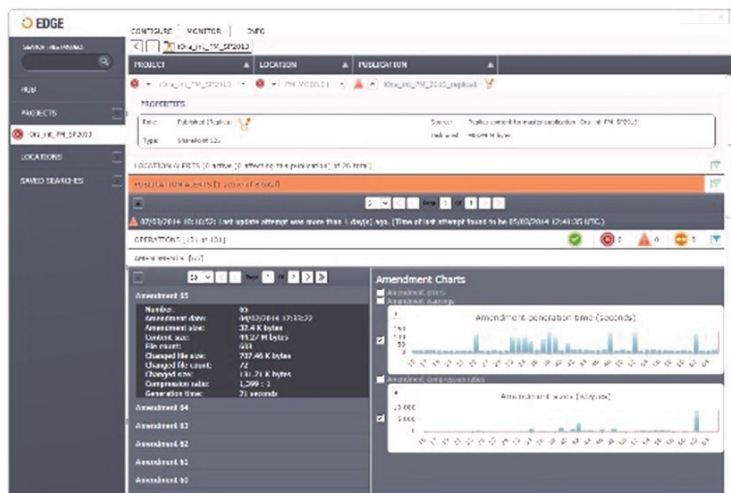


OK – the publication has no problems.

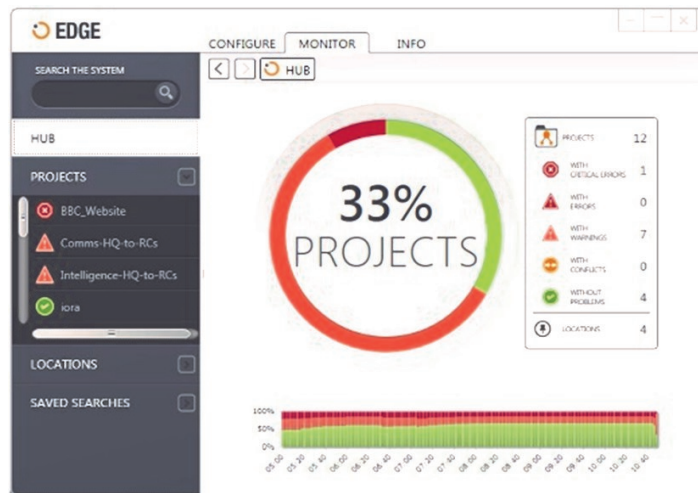
The User Interface will aggregate the information for all publications within each Project and Location and associate the worst-case status against it.

Viewing the Hub

The Hub displays an overview of the complete set of replication systems being monitored in one of two ways:



A detailed technical details view



A 'Status Wheel' visual indicator

The Technical View

The technical view is a list of Projects, Locations and Publication Instances displayed in a hierarchical list.

The diagnostic details for an individual publication instance contains:

- Any critical errors for this publication
- The publication's role, type, source and disk space used at the location.
- A list of alerts that have been raised on this publication. For example, it has not been updated with a new amendment for a given period. Alerts cannot be ignored or acknowledged manually, but will be acknowledged automatically when the situation that caused the alert is resolved.
- A list of all the Operations that have been performed on the publication and, if appropriate, any error, warning or conflict events that occurred during that operation. For example, an Update event on a Server-to-Server publication may have given rise to one or more conflicts. Counts of error, warning and conflict events are displayed at the right of the list's bar, and the list can be filtered by selecting the individual icons.
- A list of the amendments created for or applied to the publication.
- A list of the distribution servers for the publication instance, including upload/download problem statuses where appropriate.

The details for an individual Location contain:

- Its general properties including available memory and operating system version.
- A status panel displaying counts of the publications found at the Location which have errors, warnings and conflicts.
- A list of alerts that have been raised on this location. For example, it has low disk space. Alerts cannot be acknowledged manually, but will be acknowledged automatically when the situation that caused the alert is resolved.

Deployment

Replication health monitoring

For deployment of Edge the following guidelines are recommended:

1. Determine where you want to install Edge Monitor and User Interface features.
2. The Monitor feature is used to forward and aggregate replication statuses in a hub and spoke model. A hub will aggregate the data forwarded by spokes. For remote replication, there must be at least one spoke Monitor installation at each remote network.
3. The User Interface feature is normally installed with hub Monitors, but may be installed with spoke Monitors to display local-only statuses.
4. Edge communicates locally using HTTP over a chosen port, and between hub and spokes using email. Unique, designated accounts should be created for this purpose before Edge is deployed.
5. The Monitor feature will install an Express version of Microsoft SQL server called SQLLocalDB and will manage a database of replication information, so please ensure you have at least 1GB of free disk space to allow for data to increase over time.
6. When installing a hub Monitor, you must specify the email account that Edge must monitor for remote information.
7. When installing a spoke Monitor, you must specify the email recipients (i.e. the account(s) used at the hub Monitor(s)) and the email account used to send the information (these may be the same accounts).
8. When installing, you must also choose the port over which local Edge features will communicate with the Monitor, using HTTP.
9. A User Interface feature may be co-installed with the Monitor or installed onto one or more separate machines on the same network.
10. Install at least the Edge Bridge feature on every machine where the Geo-Replicator Publisher or Client is installed.
 - a) The existing Geo-Replicator components must be upgraded to the latest release.
 - b) The Bridge feature may be co-installed with a local Monitor. If not, you must specify the host machine name and the port of the Monitor installation available on the local network.

System Requirements

The Edge Monitor requires .Net 4.0 plus runtime update 4.0.2 and supports Windows 7/Windows Server 2008 or above. The iOra Edge Replication Manager service embeds Microsoft SQL Server Express 2012 (requiring at least 1GB of local storage) which cannot be installed or executed on Windows XP or Windows Server 2003. Replication Status updates are communicated using email requiring the configuration of POP3 and SMTP email ports. For complete installation requirements see product documentation.

MORE INFORMATION

For more information on any of our products or services please visit our website www.iora.com

SERVICES AVAILABLE

Geo-Replicator Compression
and Replication Solution
Technical Support
Installation and Setup
Maintenance
Guaranteed Warranty