ServiceDesk Optimiser (SdO) Product Description

Tagline

Turbocharging Service Desks with DEX Metrics

Mission

Save employees time, and make your support desk more effective, by deploying SdO on your Windows desktops, both real or virtual

Contents

Introduction

As a backgrounder for SdO please see the section below labelled: "Digital Experience Monitoring (DEM) According to Gartner"

As the name suggests, Service Desk Optimiser, or SdO, takes the effectiveness and efficiency of Service Desks, and Helpdesks, to another

level. It does this by measuring the Digital Employee Experience, or DEX, of Windows® users so that support staff have the insights they need to proactively detect and resolve the DEX issues, that users are facing, quickly and effectively.

SdO does this with a minimum of intrusion into the user's privacy while minimising the interruptions to a user's work flow as deploying SdO minimises, or eliminates, the need for users to spend time on calls with support staff.

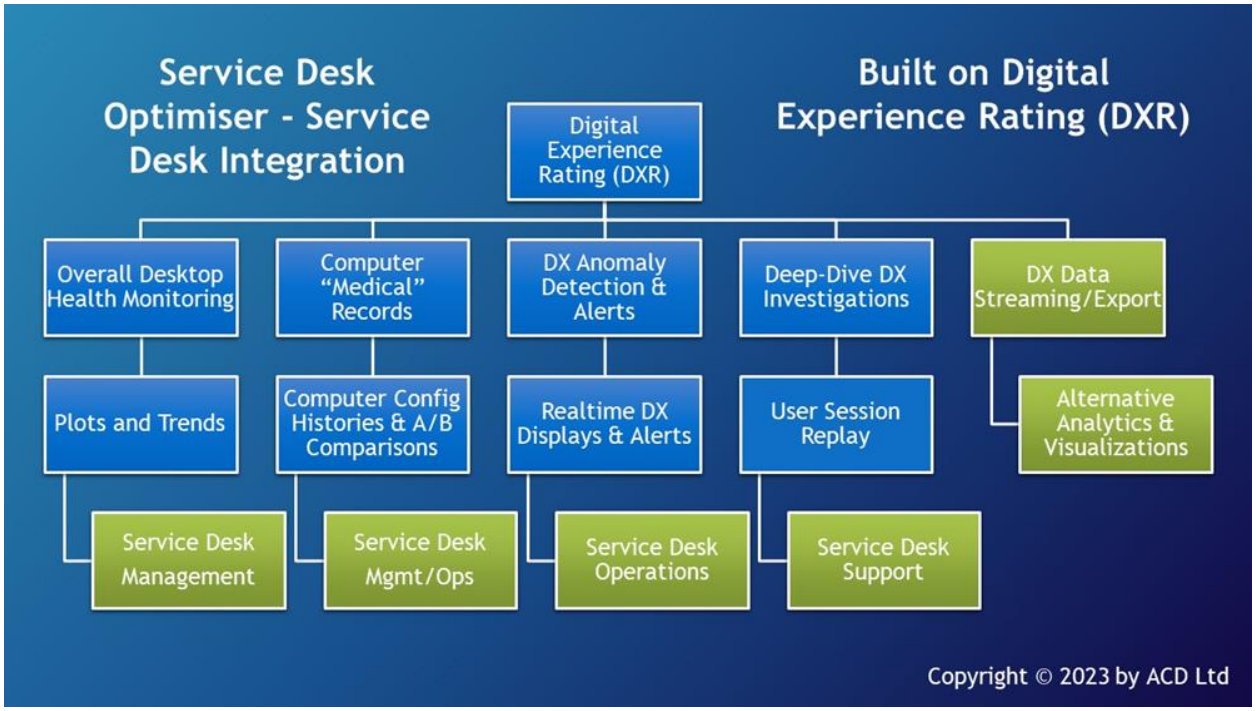
SdO can transform ServiceDesk's, for Windows Desktops, from a reactive to a proactive force within an organization by:

- Improving the ServiceDesk's existing capabilities by:
    - Reducing ticket volumes and closure times
    - Automatic DEX Performance issues detection and ticket submission for Windows Desktops such as:
        - Remote Desktops
        - Virtual Desktop Servers
        - Physical Workstation Desktops, etc
    - Live reporting and alerting of DEX performance issues
    - Deep dive DEX performance diagnostics with instrumented User Session Replay
    - Computer hardware and software configuration change history vs changes in DXR values thus forming Computer DXR Histories which are like Medical Records for Computers
    - Management Reports that demonstrate the value and efficiency of the Service Desk to the organization (e.g. improved productivity through reduced user wait times)

- Extending the range of services offered by the ServiceDesk beyond problem resolution:
    - Provide DEX measurement services as part of hardware/software product selection and onboarding capabilities

- Determine the effect of Digital Transitions on DEX performance
  e.g. transitioning from physical to virtual Windows platforms
- Management Reports
  - ROI for the most actively used desktop apps and web apps
  - Best performing platforms using automated DXR histories
  - Consequential Cost Estimates

Note: The diagram below shows the SdO Architecture and Service Desk integration points



Digital Experience Monitoring (DEM) According to Gartner

"Digital Experience Monitoring (DEM) should include these core capabilities:

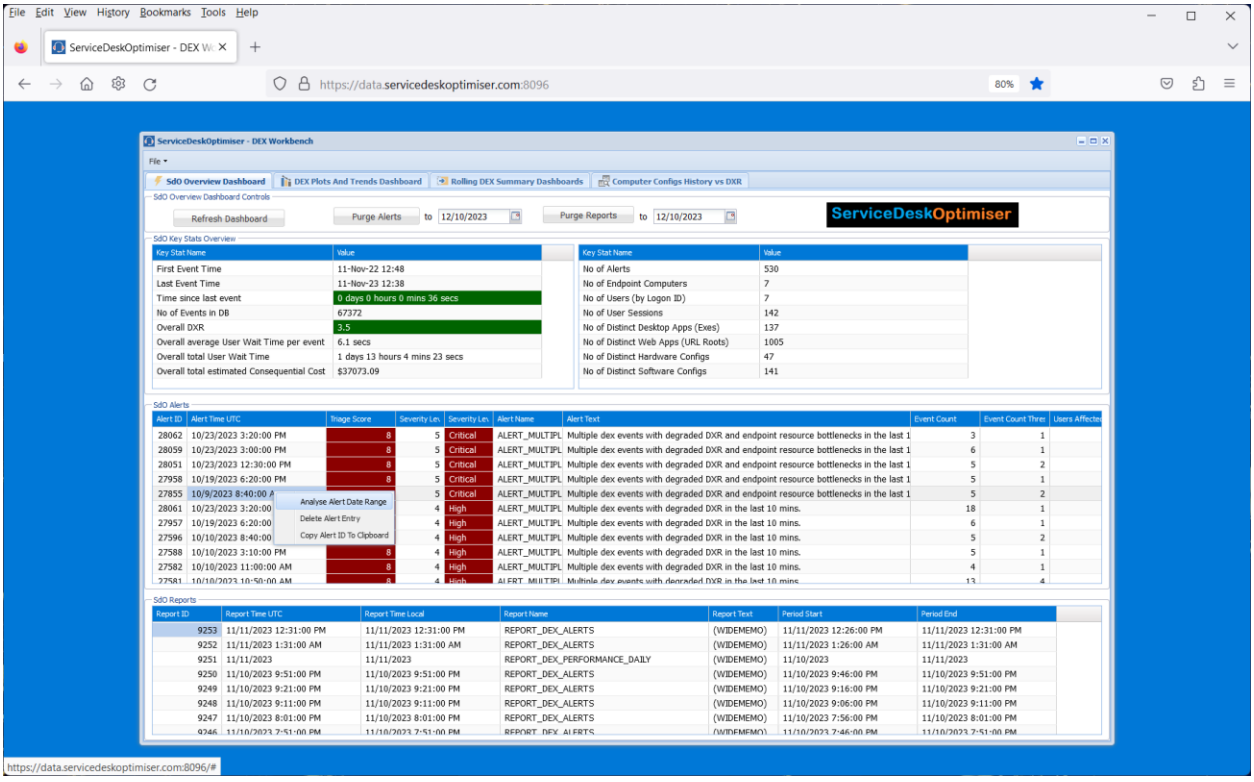
- Real user monitoring (RUM), which measures user experience from the perspective of the application (e.g., at a web application level)
- Endpoint monitoring (EP) technologies that provide visibility into end-user devices

- Synthetic transaction monitoring (STM) technologies that have been around for decades and help organizations proactively test services, such as SaaS”

Extract from “Gartner DEM Report 2020 Reprint”.

At its heart, Service Desk Optimiser, or SdO, is a Digital Experience Monitoring (DEM) application which provides Real User Monitoring (RUM) and End Point (EP) monitoring capabilities which complement Synthetic Transaction Monitoring (STM) capabilities.

Figure 1 - SdO Workbench Summary Dashboard



SdO Features

SdO has 5 primary features, or capabilities, which can be used standalone or integrated into your ServiceDesk using email alerts and SdO’s browser-based applications. These 5 capabilities are:

1. A universal, objective desktop User eXperience performance Rating (DXR)
2. Live, degraded DXR detection with automatic alerts

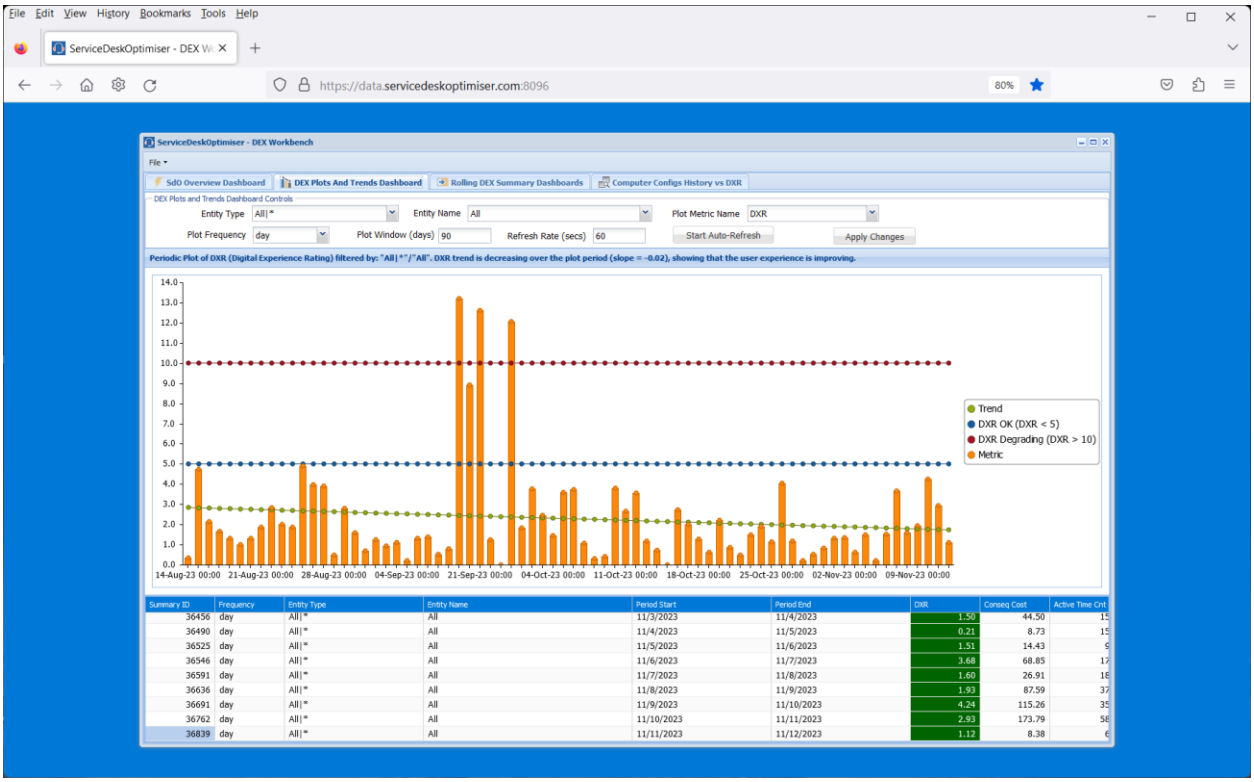
3. Computer DXR Histories – automated Before/After DXR analysis of hardware and software configuration changes
4. Desktop app/Web app Usage inventory – based on active usage times
5. User Experience Replay – Custom visualization for deep-dive DXR investigations

SdO Benefits

SdO's 5 primary features deliver these 5 benefits:

1. A universal DXR provides:
    - An objective Before/After DEX performance measure for Digital Transitions
    - Empirically compare Windows platforms, desktop apps and web apps
    - Empirically compare Hardware platforms
2. Automated DXR issue detection allows service desks to react proactively for one or more effected desktops
3. Computer Histories are like medical records for each endpoint computer (PC, workstation, VDI server, etc.) providing an automated register of hardware and software configuration changes and how these changes affect the overall DXR score of the computer
4. Understanding which desktop apps/web apps are used most frequently:
    - Assists in prioritizing which desktop apps/web apps are migrated first during Digital Transitions
    - Enables accurate ROI calculations for desktop apps/web apps
5. User Experience Replay is a dedicated utility for fast, independent deep-dive analysis of DXR issues for Desktop Apps/Web Apps

Figure 2 - SdO Workbench DXR Plots and Trends



How it Works

DXR – A Universal, Empirical Digital Employee Experience (DEX) Metric

To measure Digital Employee Experience, SdO is built around a universal, empirical Digital Employee Experience Rating, or DXR, which is the ratio of User Wait Time to User Active Time, expressed as a percentage.

The DXR metric can be applied to most desktop entities:

1. DEX Events – periods of active time
2. User Sessions – a sequence of DEX events
3. Desktop Apps – DEX events for a particular exe
4. Web Apps – DEX events for a particular browser URL

5. PC's, Workstations, Virtual Desktops, Terminal Servers – DEX events for a particular desktop device

DXR is an intuitive metric that reflects the real-world user experience. For instance:

- A DXR of 5 means that the user is wating for 5% of the time
- A DXR of 10 means the user is wating for 10% of the time.
- and so on

Experience has shown that DXR values of 5 and below represent an acceptable Digital Experience. DXR values of 10 and over, however, represent a poor or degrading Digital Experience.

While SdO is currently deployed on Window platforms, DXR can be applied on any device that has a UI with an Active Time and Wait Time, including mobile devices, providing SdO with a future proof roadmap,

How does SdO Work?

A SdO agent is installed on the Windows Desktop endpoint which then sends user session activity as a series of DEX events to the SdO server where it is stored in a database.

Each DEX event includes these fields (amongst other fields):

Event Field	Description
Event Timestamp	The date and time of event capture
Active Time	The amount of time (in secs) the user interacts with the Desktop. Note: Event ends when exe or URL changes or times-out after 60 seconds of inactivity
User Wait Time	The amount of time (in secs) the user is kept waiting by the

	desktop
DXR (Digital Experience Rating)	(User Wait Time / Active Time) * 100
Desktop App Name	Exe file name
Web App Name	URL when Desktop App is a web browser
CPU Bottleneck Detected Flag	Flag set if CPU utilisation is > 80%
RAM Bottleneck Detected Flag	Flag set if RAM utilisation is > 80%
Disk Bottleneck Detected Flag	Flag set if a disk queue is > 2
NET Bottleneck Detected Flag	Flag set if NET output queue is > 2 or NET input > 80% utilisation

The SdO “smarts” are built into the SdO agent, in fact, some of the agent’s capabilities are currently “patent pending”.

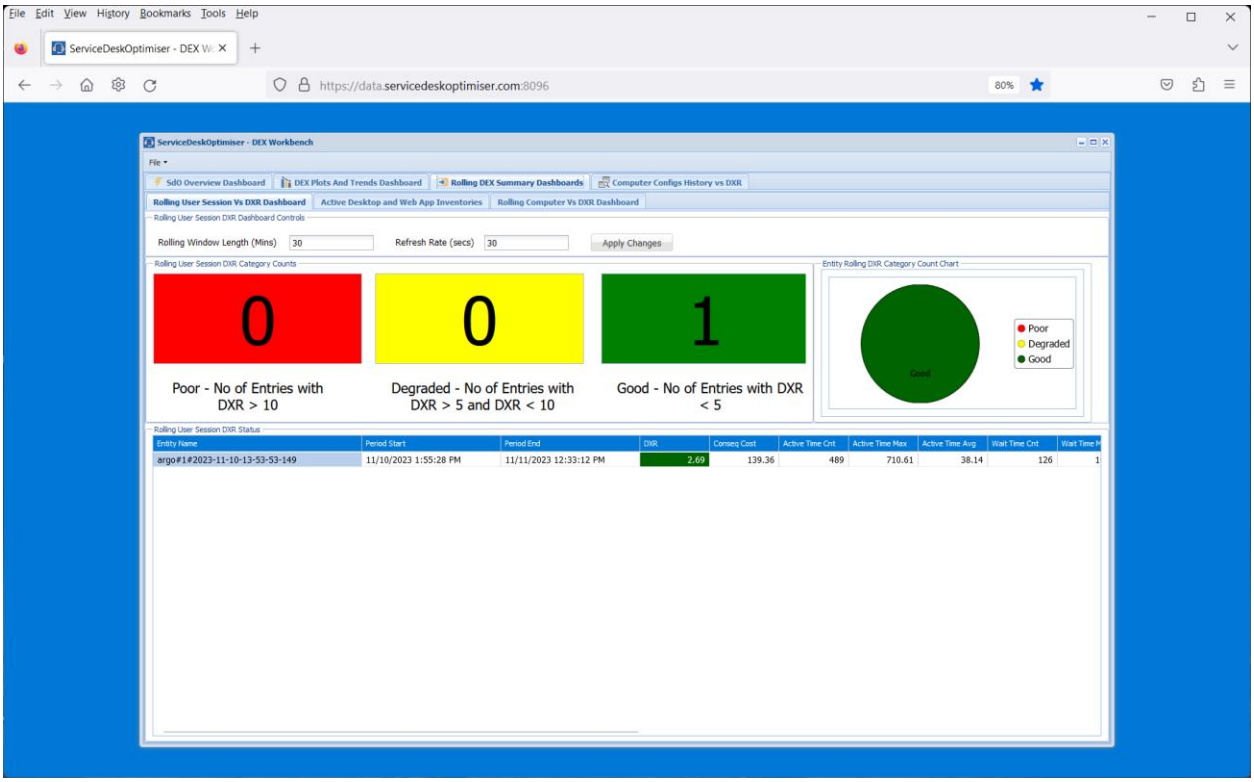
The SdO server also hosts the SdO web apps. The SdO web app used most by support staff is the SdO Workbench which provides three core capabilities:

1. **Identify User Sessions and Desktops with Poor or Degrading DXR**
    - Alerts are raised, and displayed in the SdO Overview Dashboard, when DXR thresholds are reached

- There is also the Rolling User Session vs DXR Dashboard, with a red/amber/green display which lists the currently active user Sessions and the DXR value for each user session. In this way

support staff can proactively identify users who experiencing DEX issues without a support ticket even being raised. Yet!

Figure 3 - SdO Workbench Rolling User Session DXR



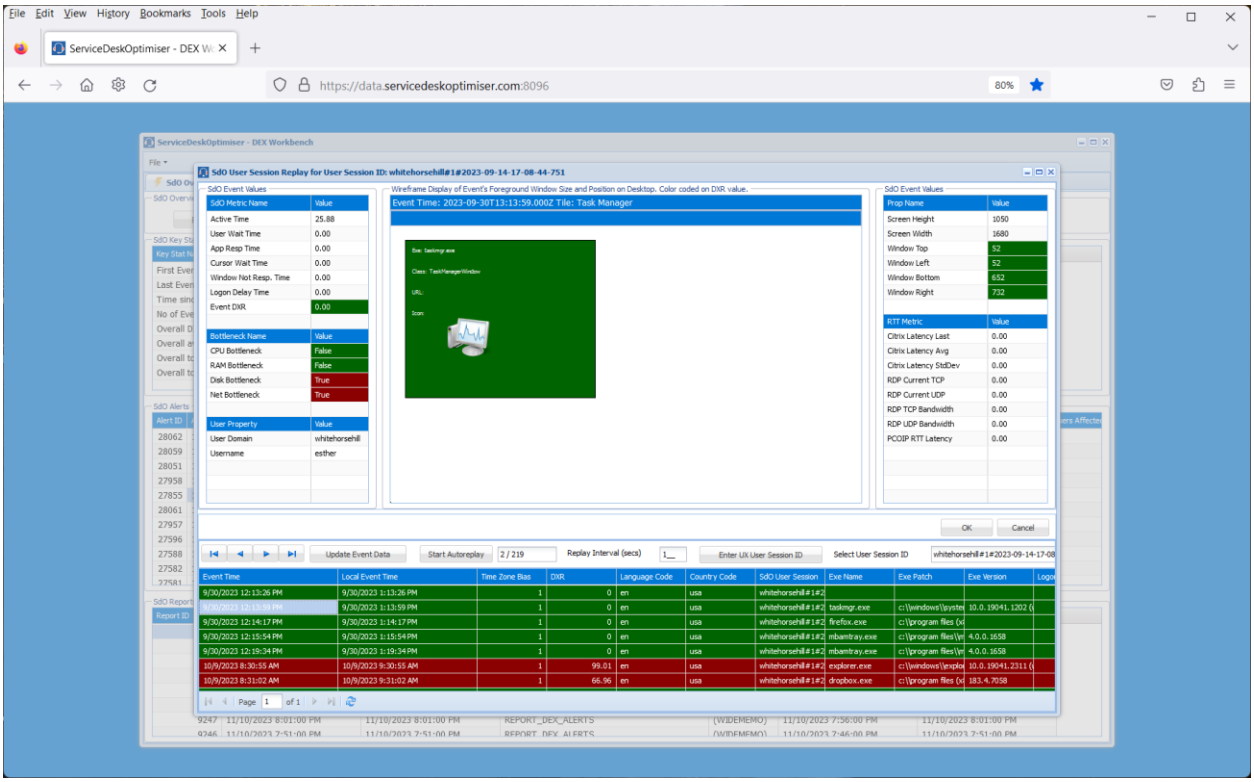
2. Investigate and Resolve Digital Experience Issues

- When a user session has been identified as having DEX issues it can investigated using the deep-dive User Session Analysis and User Session DXR Replay capabilities.

- For each period of activity, the replay app displays:
  - The DEX metrics, including the DXR metric, colour coded on the DXR value i.e. red, amber or green
  - The wireframe outline of the user's foreground window, colour coded on the DXR value. If the foreground window does not fit on the desktop the window coordinates are displayed in amber. If the foreground ground window is not visible on the desktop it is effectively invisible to the user and the coordinates are display in red as the use may think the desktop app has crashed.

- The name of the desktop app which owns the foreground window.
- The current URL (aka Web App) if the desktop app owning the foreground window is a web browser.
- The resource bottleneck flags which display red if there are CPU, RAM, Disk or Network bottlenecks detected on the endpoint device.
- The network round trip time (RTT) for the communicating with the remote user.
- Note: a period of activity ends when the user changes foreground window or does not use the keyboard or mouse for 60 seconds

Figure 4 - SdO Workbench User Session Replay



3. Digital Experience Analysis and Reporting

- Useful for understanding:

- Underlying DEX trends and objective proof of DEX performance e.g. to provide answers to any negative perceptions of DEX performance by user groups
- Which desktop apps, and web apps, are involved in periods of poor and degrading DEX performance
- Which hardware and software configurations deliver the best DEX performance

- Daily, Weekly DXR Trends
  - Views of DXR by Computer, Desktop App, Web App, etc.
  - Comparisons of DXR by Computer, Desktop App, Web App, etc.
- Active Desktop App and Web App Inventories – which Desktop Apps and Web Apps are being used most e.g. for ROI calculations
- Computer Hardware Config vs DXR history
- Computer Software Config vs DXR history

Use Cases

Use Case 1

Use Case #1 – Expedited Ticket Handling for Degraded DXR Performance

1. A Windows Desktop user experiences degraded user experience (DXR) e.g. long delay times
   - The user submits a ServiceDesk/helpdesk ticket so that the degraded DEX can be investigated and remedied
2. The ticket is assigned to a Level 0 Support Engineer who contacts the user with instructions how to provide their unique SdO User Session ID, these steps are:

    - Run the SdO utility on the endpoint computer that discloses the SdO User Session ID
    - The user is informed that: By providing the SdO User Session ID to the ServiceDesk/Helpdesk the user consents to the ServiceDesk/Helpdesk retrieving and analysing the User Session DEX event stream
    - The user provides the SdO User Session ID to the ServiceDesk/service desk via chat, email or API call
3. The Level 0 Support Engineer verifies the user session ID is the correct one and contains evidence of the degraded DXR as reported by the user (by utilizing the SdO User Session Explorer Replay web app)
4. The ticket is escalated to a level +1 engineer for analysis and the formulation of potential remedies e.g. using SdO User Session Replay
5. Potential remedies are implemented and verified by analyzing additional SdO DEX data
6. If the issue has not been remedied, then go to Step 4
7. When the DEX problem has been resolved the ticket is closed

Use Case 2

Use Case #2 – Automatic Identification of DEX Issues plus Automatic Ticket Submission, for One or More Concurrent Windows Desktop Users

1. SdO's built in alerting capabilities detects degrading DEX for one or more concurrent desktop users
2. SdO automatically submits a ServiceDesk/Helpdesk ticket, on behalf of the user, or users, so that the degraded DEX can be investigated and remedied before the situation deteriorates by raising:
    - An email (which can be automatically consumed by the ServiceDesk system)
    - Syslog Alert (which can be automatically consumed by the ServiceDesk system)
3. The DEX issue can be resolved and the User may not even be aware that a ticket had been submitted

Use Case 3

Use Case #3 – Diagnosing DEX Performance Issues using Computer DXR histories and User Session Replay

1. A User Session ID is either provided by a user, or automatically identified as a user session that has DEX issues
2. The investigating engineer can use the Computer DXR Histories web app to determine if there has been a recent change in hardware or software configuration for the computer that has affected the overall DEX performance
3. The investigating engineer can use the User Session Replay to analyze the exact circumstances of the degraded DXR e.g. what desktop app(s) where involved and the local resource utilizations at the time e.g. CPU, RAM, Disk and Network utilizations
4. The advantages of using User Session Replay are:
    a. The investigation does not disrupt the user
    b. Unlike the user, User Session Replay has an infallible memory stretching back days, or even weeks, depending on the length of the user session
    c. Reduces the amount of unintended, collateral information leaked between the user and the ServiceDesk

Use Case 4

Use Case #4 – Providing DEX measurement services as part of hardware/software product evaluation, selection and on-boarding capabilities

1. A department requests the ServiceDesk to assist with the evaluation of hardware, software or services utilizing Windows Desktops
2. The ServiceDesk support staff assist with the installation of the SdO agent on the target products and monitor the collect DEX data
3. The products under evaluation are used as though they are deployed in a production environment
4. At the end of the evaluation period the ServiceDesk assist with the interpretation of the collected DEX data to determine which products or services performed best and any adverse affect they had on the performance of other applications

5. Such tasks can be assigned to Level 0 and Level 1 support engineers to enrich their work experience and help reduce staff turnover, a common issue for ServiceDesks

Use Case 5

Use Case #5 – Determine the effect of Digital Transitions on DEX performance e.g. transitioning from physical to virtual Windows platforms

1. A department requests the ServiceDesk to assist with the evaluation of a Digital Transition involving Windows Desktops e.g. physical desktops transitioning to virtual desktops
2. The ServiceDesk support staff assist with the installation of the SdO agent on the physical desktops a number of weeks before the Digital Transition takes place.
3. During the Digital Transition further DEX data is collected from the newly deployed virtual desktops. This transitional DEX data can be analyzed by ServiceDesk support staff to guide the progress of the Digital Transition and when the process is complete
4. At the end of the Digital Transition the ServiceDesk support staff can provide a report validating the success of the project which could form part of the project signoff documents

Use Case 6

Use Case #6 – Management Reports

1. SdO can produce management reports, e.g. for the CxOs, in addition to those used by ServiceDesk management:
2. Inventories of the most actively used desktop apps and web apps for:
    - Calculating the ROI of desktop apps and web apps
    a. Prioritizing which desktop apps and web apps should be included in Digital Transitions
3. Best performing hardware platforms using automated Computer DXR Histories for:
    - Justifying system upgrades and replacement
    - Informing IT procurement processes
4. User Session Analysis
    - DXR trend analysis by User Group Membership e.g. User Role

Use Case #7 – DEX Data Real-time Bulk Export
is the quickest way to import the DEX data collected by the SdO agents directly to other third-party systems, for example:

1. Data Analysis & Reporting
2. Machine Learning (ML) and Artificial Intelligence (AI)

Licensing

ServiceDesk Optimiser comes with flexible, incentivized licensing options:

- Up to 10 desktops - free-of-charge (free support for 1 year)
- Over 10 desktops - $10/month/desktop (including support)

For support, please send an email to: contact@servicedeskoptimiser.com

Website

Please visit the SdO website at: servicedeskoptimiser.com

Glossary of Terms

There follows a glossary of the terms and acronyms used in the context of SdO:

- AI – Artificial Intelligence
- DEM – Digital Experience Management
- DEX – Digital Employee Experience
- DXR – Digital Experience Rating (Specific to SdO)
- ML – Machine Learning
- SdO – ServiceDesk Optimiser
- STM – Synthetic Transaction Measurement

End of Document