



Workspace Control

Release Notes

2022.3 (version 10.10.0.0)

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Important Information

Read the following information before continuing with installing or upgrading Ivanti Workspace Control.



- Starting with Workspace Control version 10.4, Microsoft Windows Server 2012, Windows 7 and Windows 8.0 were supported only as best effort. Since Workspace Control 2022 version 10.8.0.0, the specified operating systems are no longer supported and with Workspace Control 2022.1 version 10.8.20.0 or higher the installation of Workspace Control on machines running these operating systems is not possible anymore.
- Workspace Control 2022.2 introduced a new implementation of the **Authorized Owners** feature. If you are using the feature in your Workspace Control environment, read the following before upgrading: [Authorized Owners considerations before upgrading to Workspace Control 2022.3](#).

The ActiveReports components (libraries and object code) included in this release are proprietary to Data Dynamics, Ltd. (acquired by: GrapeCity, Inc.). By downloading and installing this release, end-users assume and accept sole responsibility of the use of the ActiveReports components, and will not act contrary to license terms applicable and available via <https://www.grapecity.com/legal/eula>.

Notices Files

The **Notices Files** offer information about the third-party components used in Ivanti Workspace Control, including the Relay Server. These files provide the names of the external components and copyright and license information. The **Notices Files** are bundled together with the Workspace Control installation files in the product archive available from [Ivanti Workspace Control Product Downloads and Release Notes](#).

Microsoft .NET Framework prerequisite

Workspace Control 2022.3 (version 10.10.0.0) requires .NET Framework 4.7.2 or higher.

Drivers

The following table shows when Workspace Control drivers were last updated:

Driver	Last updated in
FileGuard	Ivanti Workspace Control 2022.2 version 10.9.20.0
ImgGuard	Ivanti Workspace Control 2022.2 version 10.9.30.0
NetGuard	Ivanti Workspace Control 2022.2 version 10.9.20.0
RegGuard	Ivanti Workspace Control 2022.2 version 10.9.20.0
RESNFLT	Ivanti Workspace Control 2022.2 version 10.9.20.0



When upgrading to a Workspace Control version that updated the drivers previously listed, a restart is required to activate the updated drivers.

Datastore

The following table shows the Workspace Control version that introduced the Datastore revision level that applies to Workspace Control 2022.3.

Datastore revision level	Introduced in
13	RES Workspace Manager 2014 SR3



When upgrading to Workspace Control 2022.3, if the Datastore is of a lower revision level than the level specified in the table above, then the Datastore is automatically updated.

MSIX integration for Workspace Control

MSIX is a Microsoft Windows application package format that provides a modern packaging experience to all Windows applications.

MSIX is a new feature integrated in Workspace Control. It is currently in **Early Access**, under constant development and will be released in several phases to minimize the potential impact of bugs and issues. Ivanti aims to improve the feature by refining it to customer needs and feedback.



MSIX app attach is not part of the current implementation but it is planned for 2023.

Current Capabilities

In Workspace Control 2022.3 version 10.10.0.0, the following capabilities are available for the MSIX feature:

- Configure MSIX managed applications from the Workspace Control Console;
- Deploy the MSIX Package to endpoints running Workspace Control 2022.3 or higher;
- Start the MSIX Package in sessions on Microsoft Windows 10, Windows 11, Windows Server 2019 or Windows Server 2022 endpoints running Workspace Control 2022.3 or higher;
- Support for Actions configured at application start or end;
- Support for Actions inside or outside the Application Container.

With every future Workspace Control release, the MSIX feature will be enhanced with new capabilities. The feature is expected to be ready for production and generally available by the end of 2022.

Enable MSIX feature

To enable the MSIX feature for Workspace Control, configure the following string value on machines running the Workspace Control Console:

Key	HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\RES\Workspace Manager
Value	EnableMSIXSupport
Type	REG_SZ
Data	Yes



In order to run MSIX on Windows Server versions prior to 2019 20H2, enable the **Sideload apps** option in **Windows settings > Update & Security > For developers > Use developer features**.

Knows issues and limitations

Shortcuts created by the MSIX Package are added to the Start Menu. This results in shortcuts created by both Workspace Control and by the MSIX Package to be available to end-users. This is the behavior as with the MicrosoftApp-V integration for Workspace Control.

Provide feedback

Any discovered issues and feedback can be provided using this [Microsoft form](#).



Cases concerning the early access phase of the MSIX feature cannot be raised to Ivanti Support.

Authorized Owners considerations before upgrading to Workspace Control 2022.3

Authorized Owners was introduced as an early access feature in Workspace Control 2022.1. In Workspace Control 2022.2 a new implementation of the feature is present in the product. To upgrade Workspace Control, Ivanti recommends following the steps described in the [Workspace Control Upgrade Guide](#).



If the **Authorized Owners** feature was *never* used in your environment or the feature is disabled before upgrading, you can upgrade to Workspace Control 2022.3 without any concerns.



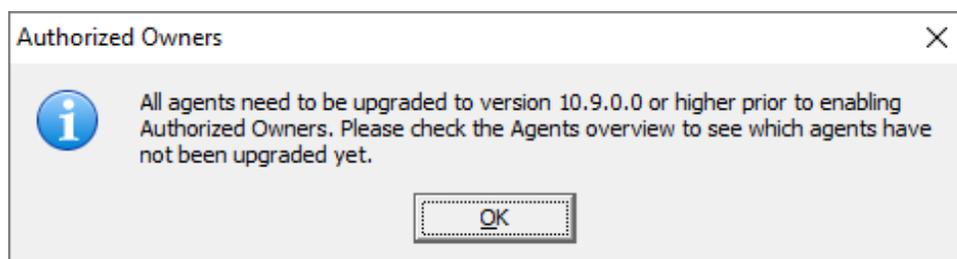
If the **Authorized Owners** feature is *enabled* in your Workspace Control environment, Ivanti recommends disabling the feature, upgrading your environment to Workspace Control 2022.3 and then re-enabling **Authorized Owners** after the upgrade is complete.

If the **Authorized Owners** feature is enabled in your Workspace Control environment and not *disabled* prior to upgrading to Workspace Control 2022.3, Ivanti recommends upgrading all Workspace Control components (Consoles, Relay Servers and Agents) in your environment to Workspace Control 2022.3 as soon as possible to avoid any issues after the upgrade.



A gradual introduction of Workspace Control 2022.3 in your environment or running a mixed environment where different versions of Workspace Control are present, including Workspace Control 2022.3, will cause non-upgraded Agents and Relay Servers to not receive Datastore updates until they are also upgraded.

When enabling the **Authorized Owners** feature from a Workspace Control 2022.3 Console, Workspace Control checks if the all the Agents in the environment are also upgraded to Workspace Control 2022.3. If not all Workspace Control Agents are upgraded, then the following message is displayed when navigating to **Security > Authorized Owners**:





Unless all Workspace Control Agents are upgraded, the **Authorized Owners** feature cannot be enabled.

It is possible to run a mixed environment where different versions of Workspace Control are present, including Workspace Control 2022.3, only if **Authorized Owners** is set to **Disabled** in the **Settings** tab and for Workspace Containers, if any are configured.



Contact Ivanti Support for assistance if you want to downgrade and they will guide through the process.

For more details on the **Authorized Owners** feature, see the [Workspace Control Administration Guide](#).

What's New

This section includes new features, compatibility updates and improvements from previous Workspace Control versions, starting with Workspace Control 2022.2 version 10.9.10.0 and up to the current version 2022.3 10.10.0.0.

Ivanti Ideas Feature Requests

Thank you for your support and continued submission of Product Enhancement Requests using the [Ivanti Ideas page on the Ivanti Community](#). These requests are reviewed every week and form a valuable input for the Workspace Control product roadmap. Please continue to submit your ideas and vote for your favorites.

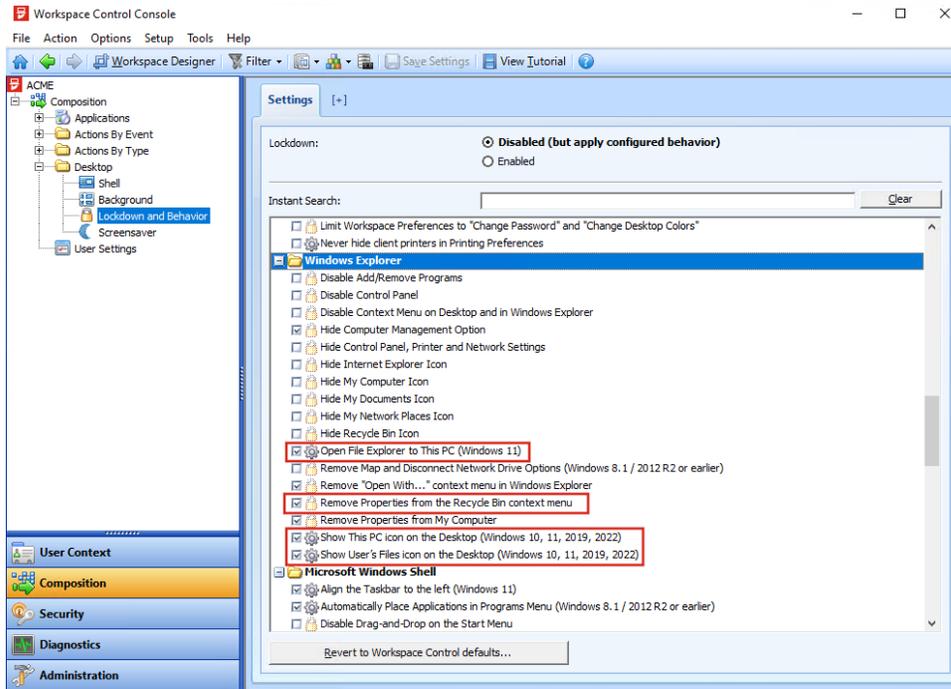
The following user requests have been addressed in this version of Workspace Control:

New Lockdown and Behavior settings

The following new settings are added to the Workspace Control Console, under **Composition > Desktop > Lockdown and Behavior > Settings** tab:

Under the **Windows Explorer** section:

- **Open File Explorer to This PC** — Configure *This PC* as the default location when opening the Windows File Explorer. This setting is available only for Windows 11.
- **Remove Properties from the Recycle Bin context menu** — Removes the *Properties* option from the Windows Recycle Bin context menu.
- **Show This PC icon on the Desktop** — Configure the *This PC* icon to be visible on the Windows Desktop. This setting is available only for Windows 10, Windows 11, Windows Server 2019 and Windows Server 2022.
- **Show User's Files icon on the Desktop** — Configure the *User's Files* icon to be visible on the Windows Desktop. This setting is available only for Windows 10, Windows 11, Windows Server 2019 and Windows Server 2022.



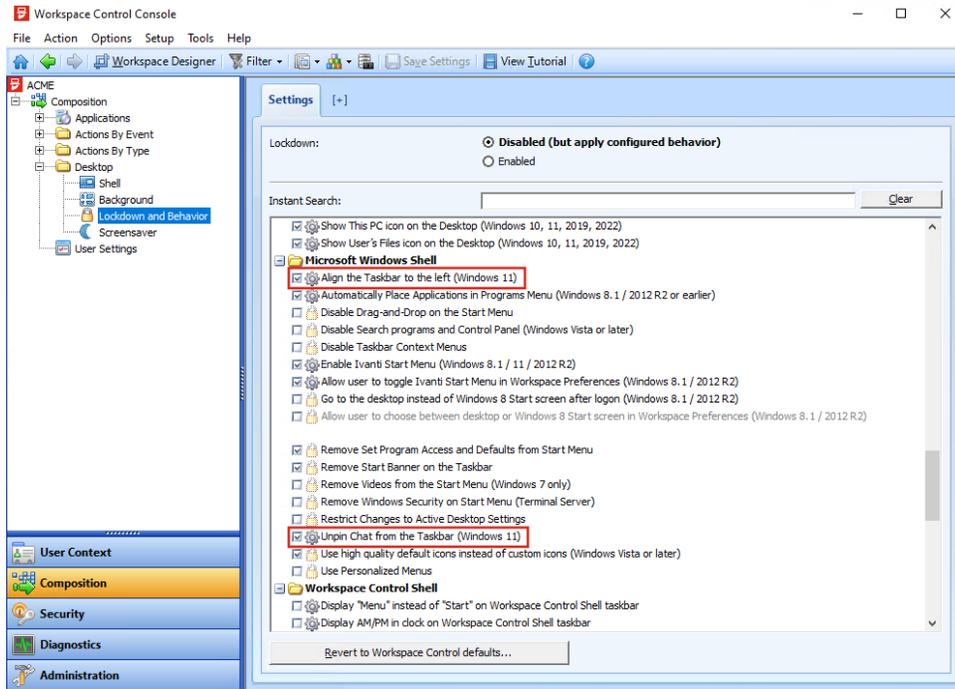
Under the **Microsoft Windows Shell** section:

- **Align the Taskbar to the left** — Aligns the Windows taskbar items to the left of the taskbar. This setting is available only for Windows 11.



When the **Enable Ivanti Start Menu** option is selected, all taskbar items are aligned to the left of the taskbar, regardless if the **Align the Taskbar to the left** option is selected or not.

- **Unpin Chat from the Taskbar** — Removes the *Chat* icon from the Windows taskbar. This setting is available only for Windows 11.

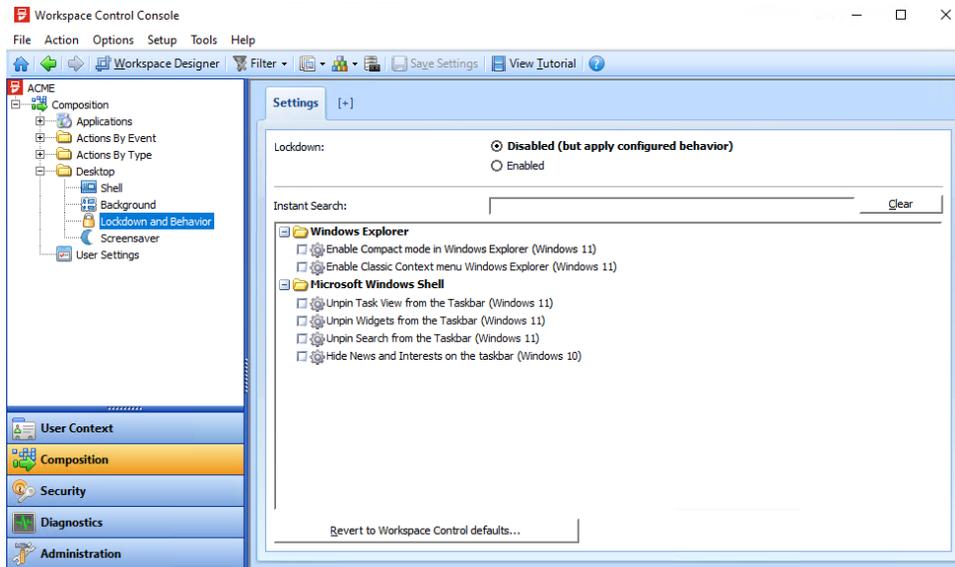


Under the **Windows Explorer** section:

- **Enable classic context menu in Windows Explorer** — Replaces the *Windows 11 context menu* with the classic Windows 10 context menu in the Windows Explorer. This setting is available only for Windows 11.
- **Enable compact mode in Windows Explorer** — Enables *Compact view* in the Windows Explorer. This decreases the space between items shown in the Explorer. This setting is available only for Windows 11.

Under the **Microsoft Windows Shell** section:

- **Hide news and interests on the taskbar** — Hides the *News and Interests* taskbar widget from the Windows taskbar. This setting is available only for Windows 10.
- **Unpin Search from the Taskbar** — Hides the *Search* bar from the Windows taskbar. This setting is available only for Windows 11.
- **Unpin Task view from the Taskbar** — Hides the *Task View* button from the Windows taskbar. This setting is available only for Windows 11.
- **Unpin Widgets from the Taskbar** — Hides the *Widgets* panel from the Windows taskbar. This setting is available only for Windows 11.



i The new **Lockdown and Behavior** settings are *disabled* by default.

For more details on **Lockdown and Behavior**, see the [Workspace Control Administration Guide](#).

MSIX integration for Workspace Control

The feature is currently in **Early Access** and is under constant development. For more details see "[MSIX integration for Workspace Control](#)" on page 6

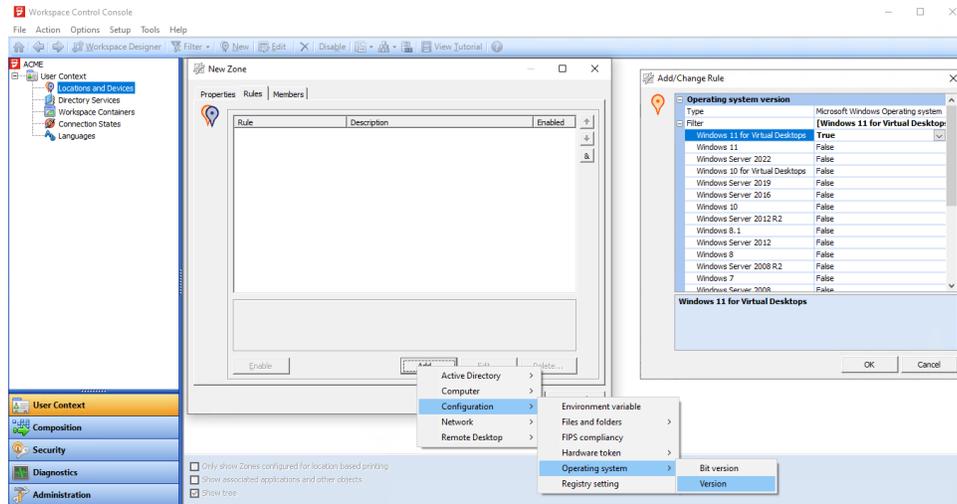
New Enhancements and Improvements

The following enhancements and/or improvements are part of this version of Workspace Control:

Windows 11 for Virtual Desktops option for Zone Rules

When configuring Microsoft operating system Rules for Zones, Windows 11 for Virtual Desktops is now available as an option.

The new option is available in the Workspace Control Console, under **User Context > Locations and Devices**. Create or edit a Zone and under its **Rules** tab, select **Add > Computer/Configuration > Operating system > Version**.

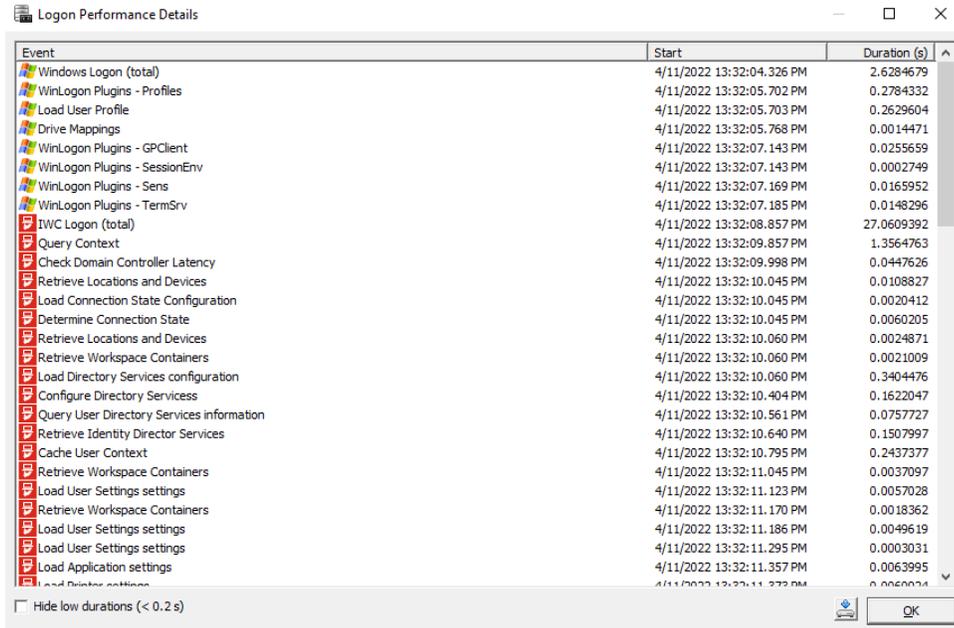


Logon Performance details

Workspace Control 2022.1 version 10.7.20.0 introduced the **Logon Performance** feature that displays statistics regarding Workspace Control session logons. If the feature is enabled, Workspace Control Agents send logon information to the Datastore when a Workspace Control managed session is started.

In Workspace Control 2022.2 version 10.9.10.0, the **Logon Performance** feature is enhanced with additional details regarding the Windows and Workspace Control events that occurs at session logon. The details include the following:

- **Event** — the name of the logon event.
- **Start** — the date and time when the logon event started.
- **Duration** — the duration of the logon event in seconds.



Event	Start	Duration (s)
Windows Logon (total)	4/11/2022 13:32:04.326 PM	2.6284679
WinLogon Plugins - Profiles	4/11/2022 13:32:05.702 PM	0.2784332
Load User Profile	4/11/2022 13:32:05.703 PM	0.2629604
Drive Mappings	4/11/2022 13:32:05.768 PM	0.0014471
WinLogon Plugins - GPClient	4/11/2022 13:32:07.143 PM	0.0255659
WinLogon Plugins - SessionEnv	4/11/2022 13:32:07.143 PM	0.0002749
WinLogon Plugins - Sens	4/11/2022 13:32:07.169 PM	0.0165952
WinLogon Plugins - TermSrv	4/11/2022 13:32:07.185 PM	0.0148296
IWC Logon (total)	4/11/2022 13:32:08.857 PM	27.0609392
Query Context	4/11/2022 13:32:09.857 PM	1.3564763
Check Domain Controller Latency	4/11/2022 13:32:09.998 PM	0.0447626
Retrieve Locations and Devices	4/11/2022 13:32:10.045 PM	0.0108827
Load Connection State Configuration	4/11/2022 13:32:10.045 PM	0.0020412
Determine Connection State	4/11/2022 13:32:10.045 PM	0.0060205
Retrieve Locations and Devices	4/11/2022 13:32:10.060 PM	0.0024871
Retrieve Workspace Containers	4/11/2022 13:32:10.060 PM	0.0021009
Load Directory Services configuration	4/11/2022 13:32:10.060 PM	0.3404476
Configure Directory Services	4/11/2022 13:32:10.404 PM	0.1622047
Query User Directory Services information	4/11/2022 13:32:10.561 PM	0.0757727
Retrieve Identity Director Services	4/11/2022 13:32:10.640 PM	0.1507997
Cache User Context	4/11/2022 13:32:10.795 PM	0.2437377
Retrieve Workspace Containers	4/11/2022 13:32:11.045 PM	0.0037097
Load User Settings settings	4/11/2022 13:32:11.123 PM	0.0057028
Retrieve Workspace Containers	4/11/2022 13:32:11.170 PM	0.0018362
Load User Settings settings	4/11/2022 13:32:11.186 PM	0.0049619
Load User Settings settings	4/11/2022 13:32:11.295 PM	0.0003031
Load Application settings	4/11/2022 13:32:11.357 PM	0.0063995
Load Printer settings	4/11/2022 13:32:11.373 PM	0.0060014

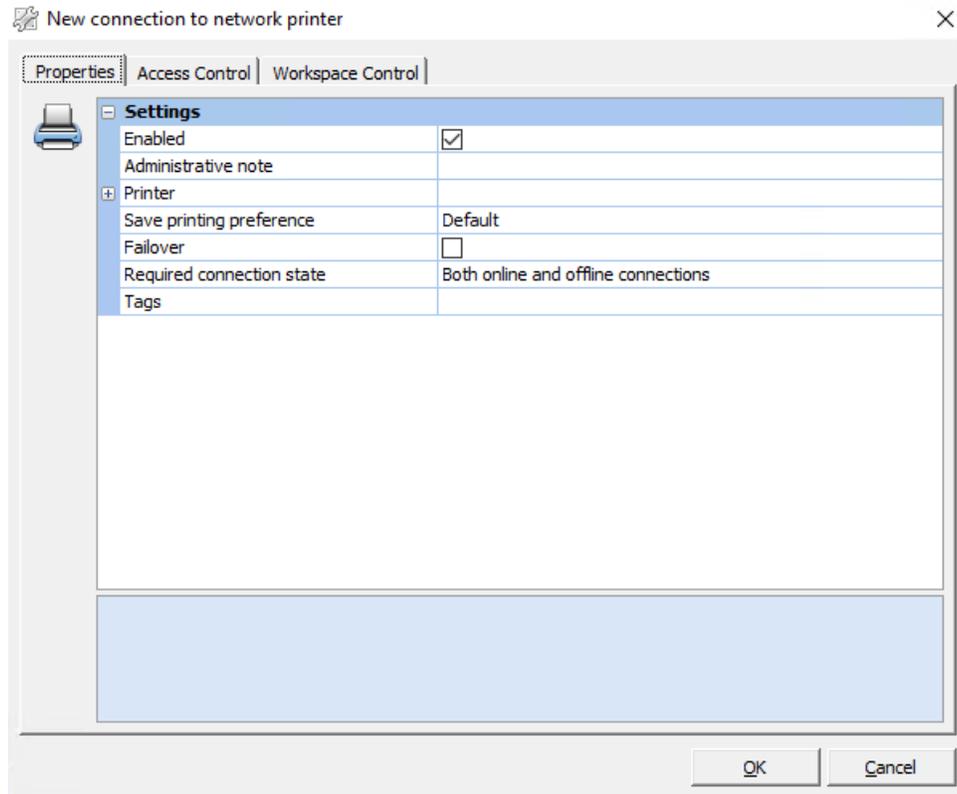
Hide low durations (< 0.2 s)

Logon events that take less than 200 milliseconds to complete can be hidden from the **Logon Performance Details** window by selecting the **Hide low durations** checkbox.

Use the **Export to file**  button to export session logon details to a CSV file.

Removed Set as default printer option from managed applications configuration

When configuring Workspace Control managed applications, printers can no longer be set as default. The **Set as default printer** option was removed from the **New connection to network printer** window.



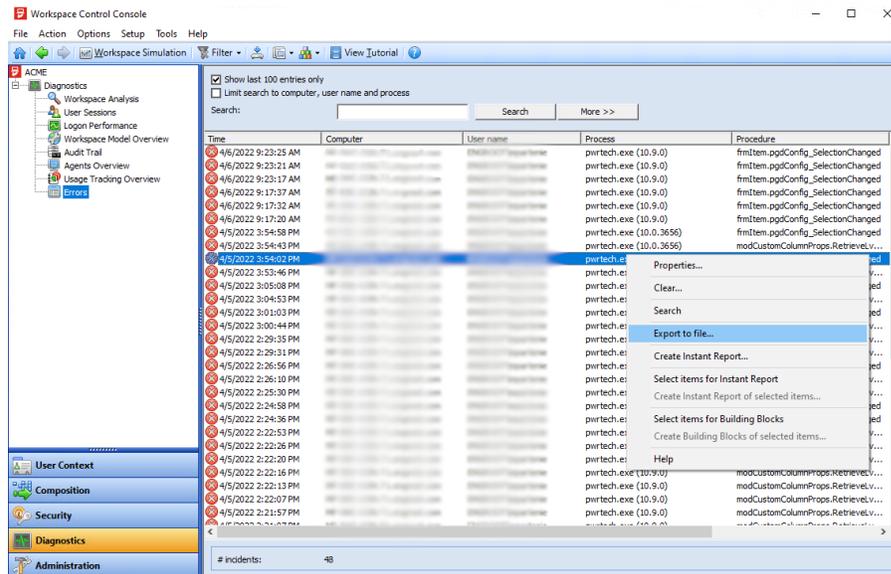
Applications are configured as Workspace Control managed applications in the Workspace Control Console, under **Composition > Applications > Start Menu** tab. To add a printer, open the **Edit application** window and navigate to **Configuration > Actions**. Select **Add** and in the **Please select action for application window** select **Printer**.

More details are found in the following [KB article](#).

Export Errors log

The Errors log can now be exported as a CSV file. To export the error log, open the Workspace Control Console, navigate to **Diagnostics > Errors** and use one of the following methods:

- Right-click in the right-side pane and select **Export to file** from the context-menu.



- From the main menu, select **Action > Errors > Export to file**.
- From the main toolbar, select the  (**Export to file**) button.

The error log can also be exported using the `pwrtech` command-line option:

```
pwrtech.exe /exportlog /type=errors /output=<output filepath>
[/outputtype=csv] [/start=<start date>] [/end=<end date>]
```

For example:

```
pwrtech.exe /exportlog /type=errors /output=C:\export\errors.csv
/outputtype=csv /start=20211230 /end=20220123
```

For more details on exporting the error log using the `pwrtech` command-line option, see the [Workspace Control Administration Guide](#).

Authorized Owners improvements

When the **Authorized Owners** feature is enabled, Workspace Control now takes into consideration the following parameters to determine if a software application is allowed to run:

- **Authorized Certificates** deny rules;
- **Authorized File Hashes** deny rules.

Authorized Owners details are now visible in the Workspace Control Console, under the **Diagnostics** node:

- **Workspace Model Overview** — under the **Security** section;
- **Workspace Analysis** — when opening the **Event Log** for a user session.

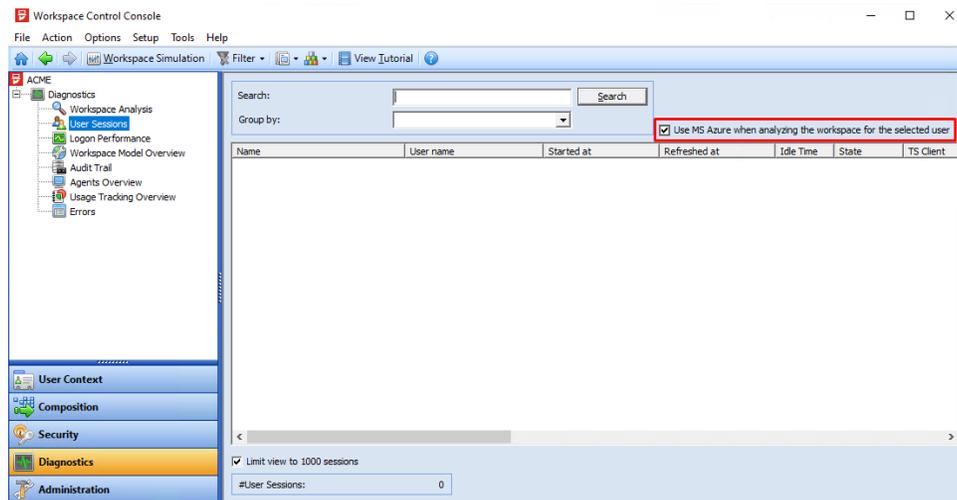
For more details on the **Authorized Owners** feature, see the [Workspace Control Administration Guide](#).

Security improvements

The security of Workspace Control has been improved. For more details, see the following [CVE record](#).

Use Microsoft Azure when retrieving User Session Diagnostics Information

Workspace Control can now treat user sessions as Microsoft Azure sessions when retrieving diagnostics information. The **Use MS Azure when analyzing the workspace for the selected user** option was introduced in the Workspace Control Console, under the **Diagnostics > User Sessions** node.



When **Use MS Azure when analyzing the workspace for the selected user** is selected, Workspace Control treats user sessions as Azure sessions when retrieving diagnostics information.



If the option is selected and Workspace Control does not retrieve any diagnostics information for a user session, then the selected user session is a non-Azure session.

When **Use MS Azure when analyzing the workspace for the selected user** is *not* selected, Workspace Control treats user sessions as non-Azure sessions when retrieving diagnostics information.



If the option is *not* selected and Workspace Control does not retrieve any diagnostics information for a user session, then the selected user session is an Azure session.

Export User settings to CSV file

User settings can now be exported to a CSV file.

The content of the CSV file is filtered by the **Show details** or **Show all User settings** options in the in the lower part of the **User settings** tab.

User settings are found in the Workspace Control Console, under **Composition > User Settings**.

For more details, see [Export User settings to CSV File](#).

Export Execute Commands to CSV file

Execute commands can start external non-Workspace Control tasks or applications during user sign-in or sign-out. Execute commands are found in the Workspace Control Console, under **Composition > Action By Type > Execute Command**.

Execute commands can now be exported to a CSV file using one of the following methods:

- Right-click in the right-side pane and select **Export to file** from the context-menu.
- From the main menu, select **Action > Execute Command > Export to file**.
- From the main toolbar, select the  (**Export to file**) button.

Export Environment Variables to CSV file

Environment variables are variables set in the memory of the user's workstation or session. The **Environment Variables** feature enables to set or modify environment variables based on various types of access control. The feature is found in the Workspace Control Console, under **Composition > Action By Type > Environment Variables**.

Environment variables can now be exported to a CSV file using one of the following methods:

- Right-click in the right-side pane and select **Export to file** from the context-menu.
- From the main menu, select **Action > Environment Variables > Export to file**.
- From the main toolbar, select the  (**Export to file**) button.

Export Drive and Port Mappings to CSV file

It is possible to create drive and port mappings based on Access Control. Drive and port mappings are found in the Workspace Control Console, under **Composition > Action By Type > Files and Folders > Drive and Port Mappings**.

Drive and port mappings can now be exported to a CSV file using one of the following methods:

- Right-click in the right-side pane and select **Export to file** from the context-menu.
- From the main menu, select **Action > Drive and Port Mappings > Export to file**.
- From the main toolbar, select the  (**Export to file**) button.

Export Drive Substitutes to CSV file

For some (legacy) applications it may still be necessary to use a fixed drive letter. You can substitute drives to create the drive needed. Drive substitutes found in the Workspace Control Console, under **Composition > Action By Type > Files and Folders > Drive Substitutes**.

Drive substitutes can now be exported to a CSV file using one of the following methods:

- Right-click in the right-side pane and select **Export to file** from the context-menu.
- From the main menu, select **Action > Drive Substitutes > Export to file**.
- From the main toolbar, select the  (**Export to file**) button.

Export Folder Redirections to CSV file

Folder redirection enables administrators to redirect the location of certain user profile folders to a different path, such as a shared network location. Folder redirections are found in the Workspace Control Console, under **Composition > Action By Type > Files and Folders > Folder Redirection**.

Folder redirections can now be exported to a CSV file using one of the following methods:

- Right-click in the right-side pane and select **Export to file** from the context-menu.
- From the main menu, select **Action > Folder Redirection > Export to file**.
- From the main toolbar, select the  (**Export to file**) button.

Export Folder Synchronizations to CSV file

Folder Synchronization synchronizes files in two designated folders, in order to ensure that the correct set of files and folders is available in the user's workspace. Folder synchronizations are found in the Workspace Control Console, under **Composition > Action By Type > Files and Folders > Folder Synchronization**.

Folder synchronizations can now be exported to a CSV file using one of the following methods:

- Right-click in the right-side pane and select **Export to file** from the context-menu.
- From the main menu, select **Action > Folder Synchronization > Export to file**.
- From the main toolbar, select the  (**Export to file**) button.

Export User Home Directory to CSV file

The **User Home Directory** feature enables the configuration of a template of the files and folders that are needed to be present in or copied to the user's home directory. The feature is found in the Workspace Control Console, under **Composition > Action By Type > Files and Folders > User Home Directory**.

User Home Directory settings can now be exported to a CSV file using one of the following methods:

- Right-click in the right-side pane and select **Export to file** from the context-menu.
- From the main menu, select **Action > User Home Directory > Export to file**.
- From the main toolbar, select the  (**Export to file**) button.

Export Printers to CSV file

The **Printers** feature enables the configuration of printer connections and makes printers available depending on the physical location of the user's machine. Printers are set up in the Workspace Control Console, under **Composition > Action By Type > Printers**.

Printers configurations can now be exported to a CSV file using one of the following methods:

- Right-click in the right-side pane and select **Export to file** from the context-menu.
- From the main menu, select **Action > Printers > Export to file**.
- From the main toolbar, select the  (**Export to file**) button.

Export User Profile Directory to CSV file

The **User Home Directory** feature enables the configuration of a template of the files and folders that are needed to be present in or copied to the user's profile directory. The feature is found in the Workspace Control Console, under **Composition > Action By Type > Files and Folders > User Profile Directory**.

User Profile Directory settings can now be exported to a CSV file using one of the following methods:

- Right-click in the right-side pane and select **Export to file** from the context-menu.
- From the main menu, select **Action > User Profile Directory > Export to file**.
- From the main toolbar, select the  (**Export to file**) button.

Export User Registry to CSV file

The **User Registry** feature enables the set up of registry keys and policies for users or groups, based on their specific situations and needs. The feature is found in the Workspace Control Console, under **Composition > Action By Type > User Registry**.

User registry configurations can now be exported to a CSV file using one of the following methods:

- Right-click in the right-side pane and select **Export to file** from the context-menu.
- From the main menu, select **Action > User Registry > Export to file**.
- From the main toolbar, select the  (**Export to file**) button.

Export Audit Trail to CSV file

The **Audit Trail** shows detailed information about all modifications in your Workspace Control environment, including the installation of Service Packs (if applicable). The feature is found in the Workspace Control Console, under **Diagnostics > Audit Trail**.

The Audit Trail information can now be exported to a CSV file using one of the following methods:

- Right-click in the right-side pane and select **Export to file** from the context-menu.
- From the main menu, select **Action > Audit Trail > Export to file**.
- From the main toolbar, select the  (**Export to file**) button.
- Using the `pwrtech` command line:

```
pwrtech.exe /exportlog /type=audittrail /output=<output filepath>
```

For more details on exporting the Audit Trail, see the [Workspace Control Administration Guide](#).

Authorized Owners improvements

Authorized Owners details are now visible in the Workspace Control Console, under the **Diagnostics** node:

- **User Sessions > Event Log**;
- **User Sessions > Workspace Model Overview** — under **Security** section;

For more details on **Authorized Owners**, see the [Workspace Control Administration Guide](#).

Authorized Certificates improvements

Authorized Certificates details are now visible in the Workspace Control Console, under the **Diagnostics** node:

- **User Sessions > Event Log**;
- **User Sessions > Workspace Model Overview** — under **Security** section;

For more details on **Authorized Certificates**, see the [Workspace Control Administration Guide](#).

Deprecated Management Portal

The Management Portal integration of Workspace Control is now a deprecated feature and is no longer actively developed.

The Management Portal is a separate installation and the Management Portal integration is found in the Workspace Control Console, under **Setup > Management Portal**

Bug Fixes

The Workspace Control 2022.3 Release Notes is a cumulative document that includes bug fixes from previous Workspace Control versions, starting with Workspace Control 2022.2 version 10.9.10.0 and up to the current version 2022.3 10.10.0.0.

The following customer support issues have been resolved in this release:

Problem ID	Title
87332	When an ODBC connection is configured to be applied in Workspace Control managed sessions, changing its name results in the creation of a new, but broken ODBC connection. The new connection does not inherit the settings of the original ODBC connection. ODBC connections are configured in the Workspace Control Console, under Composition > Applications > Data Sources . More details in the following KB article .
87405	In a specific scenario, after a Microsoft Active Directory Service user or group was renamed, running the Verify SIDs for groups and users maintenance task results in a failed operation and the following output message is displayed: <i>Accountname [<domain>\<name>] does not match SID for configured user/group for Object [<objectname>] (<Applicationname>)</i> . Maintenance tasks are found in the Workspace Control Console, under Administration > Maintenance . More details in the following KB article .
88217	In a specific scenario, after a Microsoft Active Directory Service user or group was renamed, running the Verify SIDs for groups and users maintenance task does not update the Group name with the new name. Maintenance tasks are found in the Workspace Control Console, under Administration > Maintenance . More details in the following KB article .
88894	After upgrading to Workspace Control 2021.1 version 10.6.30.2 or higher, Workspace Control File Types HTTP and HTTPS protocol handlers are applied during user sign-in, but are then overwritten by the operating system which applies its default protocol handlers. More details in the following KB article .
89439	Sometimes, end-users cannot start applications from the Windows Start Menu from within Workspace Control managed sessions. For each attempt, a new <code>pwrgate.exe</code> instance is started and cannot be closed during the session. More details in the following KB article .

Problem ID	Title
89710	After upgrading to Workspace Control 2022.2 version 10.9.10.0, the new Lockdown and Behavior settings introduced in this version were enabled by default, instead of being disabled. The new settings are found in the Workspace Control Console, under Composition > Desktop > Lockdown and Behavior > Settings tab. More details in the following KB article .
88988	When using Microsoft Azure Active Directory (AD), all configured Azure AD groups are visible in Workspace Control managed sessions, under Workspace Preferences > Diagnostics > Group membership , instead of displaying only the Azure AD groups of which the user is a member. More details in the following KB article .
89018	When using the Workspace Analysis tool, no Event Logs are generated for Microsoft Azure Active Directory accounts. The Workspace Analysis tool is found in the Workspace Control Console, under Diagnostics > Workspace Analysis . More details in the following KB article .
89019	When Workspace Control Agents are joined to Microsoft Azure Active Directory, the Agents overview shows Domain as being WORKGROUP, instead of AzureAD joined. The Agents overview is found in the Workspace Control Console, under Administration > Agents > Agents tab. More details in the following KB article .
89169	Sometimes, when the Workspace Control Shell is enabled for Workspace Control managed sessions, applications cannot be launched from Desktop shortcuts. The Workspace Control Shell is enabled from the Workspace Control Console, under Composition > Desktop > Shell . More details in the following KB article .
89483	Write actions to the Microsoft App-V Virtual File System (VFS) took more time than expected when the Workspace Control FileGuard filter driver was active. More details in the following KB article .
89650	Sometimes, after applying an Access Control -based filter in the User Sessions overview, the Workspace Control Console can become unresponsive for some time. This time increases with number of user sessions where the filter is applied. The active user sessions are found in the Workspace Control Console, under Diagnostics > User Sessions . More details in the following: KB article 1 and KB article 2 .

Problem ID	Title
89710	After upgrading to Workspace Control 2022.2 version 10.9.10.0, the new Lockdown and Behavior settings introduced in this version were enabled by default, instead of being disabled. The new settings are found in the Workspace Control Console, under Composition > Desktop > Lockdown and Behavior > Settings tab. More details in the following KB article .
89858	After upgrading to Workspace Control 2022.1 version 10.8.10.0 or higher, user settings are not saved when a force sign-out is triggered. This occurs on machines running Microsoft Windows Server operating systems, where Citrix Virtual Delivery Agent (VDA) is installed. A force sign-out can be triggered from the Workspace Control Console, under Diagnostics > User Sessions . More details in the following KB article .
89898	After upgrading to Workspace Control 2022.2 version 10.9.10.0, the new Lockdown and Behavior settings introduced in this version were enabled by default on Workspace Containers, instead of being disabled. The new settings are found in the Workspace Control Console, under Composition > Desktop > Lockdown and Behavior > Settings tab. More details in the following KB article .
87938	Sometimes, after upgrading to Workspace Control 2021.2 version 10.7.20.0 or higher, publishing an application from the Workspace Control Console using the Citrix XenApp Publishing integration results in error: <i>Unknown error while publishing</i> . The Citrix XenApp Publishing integration is found in the Workspace Control Console, under Setup > Integration > Application Virtualization > Citrix XenApp Publishing . More details in the following KB article .
89048	When the <code>\$adinfo <property></code> function is used in Workspace Control to return a value of the specified user property from Active Directory, ADInfo property values are missing in offline Workspace Control managed sessions. More details in the following KB article .
89762	After upgrading to Workspace Control 2022.1 version 10.8.10.0 or higher, when signing into a Workspace Control managed session on machines running Microsoft Windows Server operating systems, the Workspace Control splash screen becomes unresponsive when querying the computer name or takes up to several seconds to complete the step. More details in the following KB article .

Problem ID	Title
89813	After upgrading to Workspace Control 2022.1 version 10.8.0.0 or higher, the Logon Performance Details window is empty if the Datastore is split between a primary and a secondary Datastore. Logon Performance is found in the Workspace Control Console, under Diagnostics > Logon Performance . More details in the following KB article .
89928	After upgrading to Workspace Control 2022.1 version 10.9.0.0 or higher, the Ivanti Start Menu is not displayed in Workspace Control managed sessions on machines running Microsoft Windows Server 2012 R2. The Ivanti Start Menu is enabled in the Workspace Control Console, under Composition > Desktop > Lockdown and Behavior . More details in the following KB article .
89931	After upgrading to Workspace Control 2022.2 version 10.9.20.0, when a Microsoft Azure Active Directory Connector and a Microsoft Active Directory Connector are defined in the Workspace Control Console, under User Context > Directory Services , several errors occur when starting the Workspace Control Console and when navigating to Diagnostics > Workspace Analysis . More details in the following KB article .
89944	When Workspace Control manages user sessions and the Azure Blob Storage User Settings integration is configured, the Azure website generates the following error after deploying the <code>IWC.Azure.UserSettings</code> ZIP file: <i>You do not have permission to view this page.</i> More details in the following KB article .
90007	After upgrading to Workspace Control 2022.2 version 10.9.20.0, selecting multiple active sessions in the Workspace Control Console, under Diagnostics > User Sessions , results in error: <i>Runtime error '91', Object variable or With variable is not set.</i> After acknowledging the error, the Workspace Control Console closes. More details in the following KB article .
90053	After upgrading to Workspace Control 2021.2 version 10.7.20.0 or higher, in a specific scenario where the <code>InterceptManagedApps</code> registry setting is configured, a duplicate Microsoft Edge shortcut without an icon is created in the Start Menu of Workspace Control managed sessions. More details in the following KB article .

Problem ID	Title
90081	<p>Sometimes, when signing into a Workspace Control managed session on a Agent running Workspace Control 2022.2 version 10.9.20.0, the following <code>pfwsmgr.exe</code> error occurs: <i>ComputerJoinStatus.TryGetComputerJoinStatus Error: Object reference not set to an instance of an object.</i> The error occurs in the Workspace Control Console, when navigating to Diagnostics > User Sessions or when opening the Error Log for a user session.</p> <p>More details in the following KB article.</p>
90092	<p>Sometimes, when Managed Application Security and File Certificate Security are enabled, end-users can experience a delay when launching Microsoft Teams in Workspace Control managed sessions.</p> <p>More details in the following KB article.</p>
90096	<p>After upgrading to Workspace Control 2022.1 Service Update 1 version 10.6.30.2 or higher, in a specific scenario where a Citrix Desktop session configured as Single Session Server is started on a machine running Microsoft Windows Server 2019, the Workspace Control managed session results into a black screen after the Workspace Control splash screen completes loading.</p> <p>More details in the following KB article.</p>
90140	<p>After upgrading to Workspace Control 2022.1 version 10.8.20.0 or higher, when starting the Workspace Control Console as a different user than the signed-in user on Microsoft Windows Server 2019 or Windows 10, the following <code>pwrtech.exe</code> error occurs: <i>UwpApplicationManager.GetXmlFromFile Error: (9) Subscript out of range.</i> The error occurs when opening a managed application under Composition > Applications.</p> <p>More details in the following KB article.</p>
90144	<p>After configuring an administrative role with a combination of Modify, Read or Deny access permissions for sub-nodes in Security > Authorized Owners, the Workspace Control Console behaves unexpectedly. Administrative roles are configured in the Workspace Control Console, under Administration > Administrative Roles.</p> <p>More details in the following KB article.</p>

Problem ID	Title
90165	After upgrading to Workspace Control 2022.1 version 10.9.20.0 or higher, when logging into a Workspace Control managed session on a machine running Microsoft Windows 10 build 21H2, a stop error occurs during sign-in which prevents the sign-in process from completing. More details in the following KB article .
90205	When an Agent running Workspace Control 2022.1 version 10.8.0.0 or higher is connected directly to the Datastore using <i>SQL Server Login</i> as the authentication method, Usage Tracking fails and the following error occurs: <i>Connection to the database could not be established. Usage Tracking Viewer will now exit.</i> This happens when opening Workspace Preferences > Other tab in Workspace Control managed sessions. More details in the following KB article .
90206	Sometimes, when creating a new Datastore using the Datastore Wizard during the installation of Workspace Control 2022.2 version 10.9.0.0 or higher, the Datastore creation process fails. More details in the following KB article .
90198	The following error message occurs in IWC 10.8.20.0 and Relay Servers: <i>An existing connection was forcibly closed by the remote host.</i> More details in the following KB article .
90291	Since version 10.9.10.1, the <code>mailto</code> protocol configured in the Console under Composition > Applications > File Types tab of the Managed Application, is not being applied in a Workspace Control managed session. More details in the following KB article .
90319	<code>Res.exe</code> causes high CPU usage when Logon Performance option is active and users log on to the server. The issue does not appear on every server. More details in the following KB article .
90369	When an Ivanti Workspace Control Managed Session is signed in on an Agent with Workspace Control 2022.2 (10.9.20.0) the following error message can be displayed in the User Session and the Error log in the Console. More details in the following KB article .

Problem ID	Title
90592	<p>It is not possible to offer remote assistance from the Console that is running on a Windows Server 2012 R2.</p> <p>When starting Remote Assistance, a screen is shown with an overview for the parameters used in <code>MSRA.EXE</code>.</p> <p>More details in the following KB article.</p>
Internal finding	<p>Sometimes, refreshing the icon for existing UWP applications configured as Workspace Control managed applications results in the following <code>pwrtech.exe</code> errors: (9) <i>Subscript out of range</i> and (91) <i>Object variable or With block variable not set</i>. The Refresh Icon  button is found in the Edit application window, under Properties > General > Default icon field, when creating or editing UWP applications.</p>
Internal finding	<p>After configuring the Ivanti Automation integration, Automation Dispatchers are not discovered by Workspace Control when testing the Automation integration configuration. The Ivanti Automation integration is configured in the Workspace Control Console, under Setup > Integration > Ivanti products > Automation > Settings tab.</p>
Internal finding	<p>Removed the New button from the Log tab of the Authorized Owners feature. The feature is found in the Workspace Control Console, under Security > Authorized Owners.</p>
Internal finding	<p>When the Authorized Owners feature was enabled, the Access Control configuration for Authorized Files was ignored when Workspace Control determined if a software application is allowed to run or not.</p>
Internal finding	<p>In the Logon Performance Details window, Microsoft Client-side Extensions (CSE) were displayed using the Workspace Control logo instead of the Microsoft Windows logo. Logon Performance is found in the Workspace Control Console, under Diagnostics > Logon Performance.</p>
Internal finding	<p>In the Logon Performance Details window, the Microsoft Windows logo was used for <code>IWC Logon (total)</code> instead of the Workspace Control logo. Logon Performance is found in the Workspace Control Console, under Diagnostics > Logon Performance.</p>
Internal finding	<p>Sorting the Log tab of Logon Performance did not work correctly. Logon Performance is found in the Workspace Control Console, under Diagnostics > Logon Performance.</p>

Additional information

Workspace Control Product Area

Product downloads and documentation, or useful configuration and troubleshooting guides are found at the following link:

<https://forums.ivanti.com/s/workspace-control-powered-by-res>

Previous Versions of Ivanti Workspace Control

Downloads links to previous versions of Ivanti Workspace Control and their corresponding release notes are available on the Ivanti Community:

<https://forums.ivanti.com/s/article/Ivanti-Workspace-Control-revision-download-links>

Supported Operating Systems and Technologies

Supported Operating Systems, Database Systems, Directory Services, and third-party software are detailed in the Compatibility Matrix:

https://help.ivanti.com/res/help/en_US/IWC/2022/Help/Content/49657.htm

Workspace Control Upgrade Guide

Information about the upgrade path of Workspace Control is found at the following link:

https://help.ivanti.com/res/help/en_US/IWC/2022/Help/Content/10032.htm

Workspace Control Antivirus Best Practices

Antivirus exclusions required for Workspace Control are found at the following link:

https://help.ivanti.com/res/help/en_US/IWC/2022/Help/Content/10036.htm

Workspace Control Ideas

Vote for new ideas or submit your own ideas for Workspace Control:

<https://ivantiideas.uservoice.com/forums/928756-ivanti-workspace-control>

Workspace Control Administration Guide

Information about installing, configuring, and using Ivanti Workspace Control is available in the Administration Guide:

https://help.ivanti.com/res/help/en_US/IWC/2022/Help/default.htm