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## Bi-Directional Permissions View

### OVERVIEW

Varonis DatAdvantage provides a complete, bi-directional view into the permissions structure of unstructured and semi-structured file systems, so that administrators and data owners can quickly answer critical questions about windows-style folders, UNIX directories, and SharePoint sites:

- Who has access to a folder?
- Which folders does a user or group have access to?

Believe it or not, these questions are difficult to answer with traditional approaches.

### TRADITIONAL/MANUAL APPROACHES

#### *Who has access to a folder?*

In Windows, the first step in is to right-click on a folder, and select properties, and then the security tab.

Listed in the top window of the security tab are the groups that have access to the folder, and any *explicitly* named users (as opposed to users which are contained in groups). This list of groups and users is referred to as an Access Control List, or ACL; the groups and users listed are referred to as Access Control Entries, or ACE's.

Each ACE has a list of actions, or permissions, that it may perform on the folder, as listed in the lower window.

The second step is to determine who the members are of the groups listed on the folder.

In order to do that we'll need to consult Active Directory, the directory service that stores these groups and their members. The ACL may contain entries from the server's local user and group repository as well, for which we will need to consult the computer management interface on the server.

In the Active Directory Users & Computers MMC, double-click on each group, and look at the members tab, and write them down or print screen. If any groups contain other groups (referred to as nested groups) we'll need to list all the members of these and any nested groups underneath, on down the group hierarchy.

**What folders does a user or group have access to?**

Let’s say an end user calls the helpdesk and says, “My boss says I need to be put into a group called, ‘Group\_Finance.’” That’s a pretty easy request to fulfill-- just open up the Active Directory MMC and a few clicks later the user is added. The problem, however, is that no one really knows what data that group provides access to.

In order to determine what folders a group or a user has access to, every folder must be examined to see if it contains the user or group in question, or if contains a group that the user or group in question is a member of.

The first step is to check in Active Directory to see if the group you’re interested in is a member of any other groups. You should also check to see if the group is in any local groups on the servers you’re looking at. You’ll need to create a list of all the groups that contain the group you’re interested in—or “parent” groups.

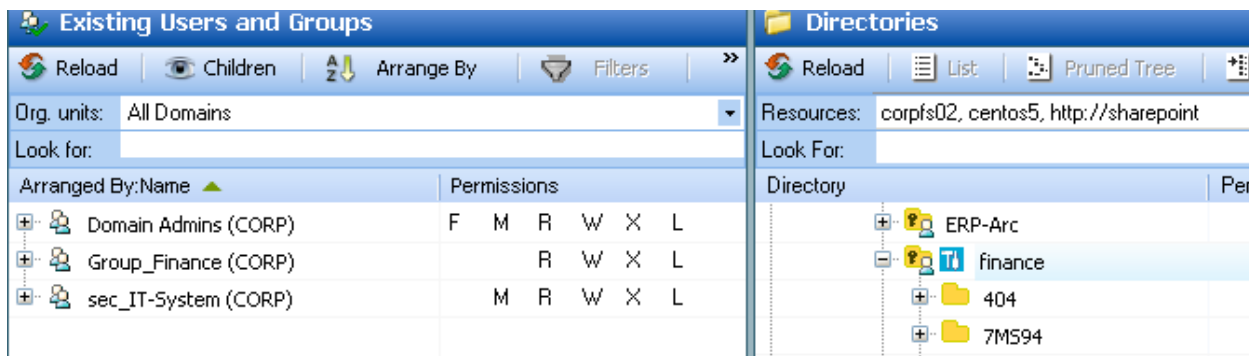
Next, start right-clicking on all the folders—any of those groups here? How about the subfolders? As a rule of thumb, a terabyte of data contains roughly 50,000 folders, so this may take a while...

**VARONIS APPROACHES**

**Varonis DatAdvantage Shows Who Has Access to a Folder**

With Varonis DatAdvantage, there are two straightforward ways to determine who has access to a folder.

The first is to double-click on the folder in the Work Area:



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Then expand each group and nested group, just click the “+” symbol. Both Active Directory and local server groups are enumerated.

	F	M	R	W	X	L
[-] Domain Admins (CORP)						
[+] sec_IT-Services (CORP)						
[+] sec_IT-Backup-Group (CORP)						
[-] sec_IT-Admins (CORP)						
[+] Laura Wyatt (CORP)						
[+] Kim Heins (CORP)						
[+] Kevin Simpson (CORP)						
[+] John Leslie (CORP)						
[+] Jim Sheldon (CORP)						
[+] Harry Lampkin (CORP)						
[+] Dorothy Stacy (CORP)						
[+] Courtney Solon (CORP)						
[+] Clay Owens (CORP)						
[+] Carolyn Levy (CORP)						
[+] Bill Whitley (CORP)						
[+] Benjamin Hastings (CORP)						
[+] Melissa Cooley (CORP)						
[+] Martha Tolle (CORP)						
[+] Laura Wyatt (CORP)						
[+] Larry Llano-Restrepo (CORP)						
[+] Kim Heins (CORP)						

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The second method is to simply run one of the Varonis DatAdvantage built-in reports, *User or Group Permissions on a Directory*, specifying the directory in question. This report (as with all DatAdvantage reports) can be run on demand, or scheduled to run and be delivered via email or share distribution automatically.

Access Path	File Server	User/Group	SAM Account Name	Current Permissions
C:\Share\finance				
	corpfs02	CORP\sec_IT-System	sec_IT-System	MRLXW
	corpfs02	CORP\Robert Stepp	RobertStepp	MRLXW
	corpfs02	CORP\Pamela Cousins	PamelaCousins	MRLXW
	corpfs02	CORP\Nathan Sonneborn	NathanSonneborn	RLXW
	corpfs02	CORP\Michael Federle	MichaelFederle	RLXW
	corpfs02	CORP\Michael Barcio	MichaelBarcio	FMRLXW
	corpfs02	CORP\Melissa Cooley	MelissaCooley	FMRLXW
	corpfs02	CORP\Martha Tolle	MarthaTolle	FMRLXW
	corpfs02	CORP\Marisa Tilley	MarisaTilley	MRLXW
	corpfs02	CORP\Maria Hirasaki	MariaHirasaki	RLXW

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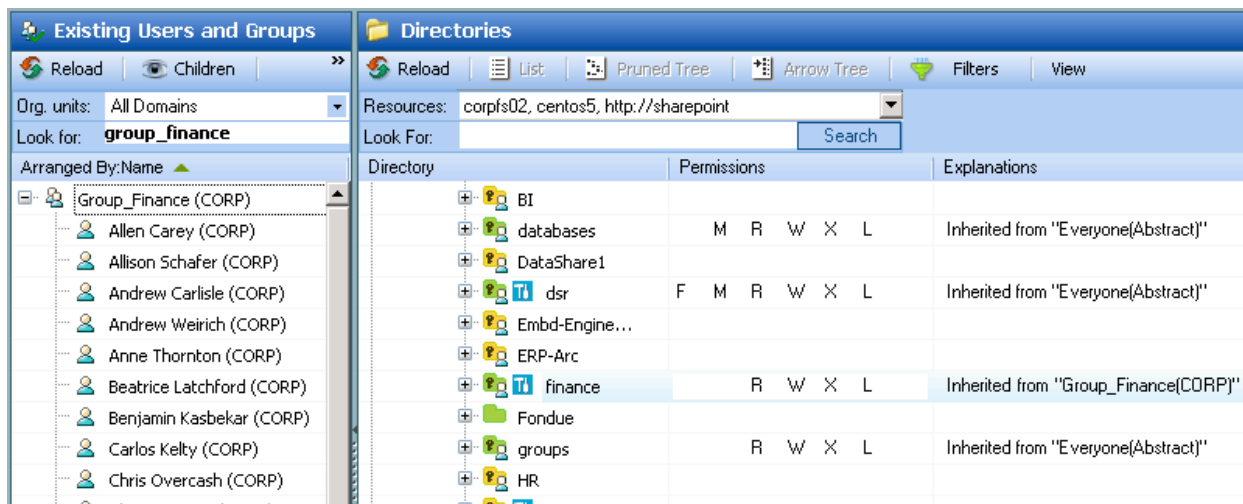
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**Varonis DatAdvantage Shows Which Folder a User or Group Has Access To**

With Varonis DatAdvantage, there are two straightforward ways to determine which folders a user or group has access to—through the DatAdvantage GUI and through the report Effective Permissions for a User or Group.

In the DatAdvantage GUI, type in the name of the user or group you’re interested in, and double-click it when it appears. All the folders that turn green on the right are those that the user or group has access to; all the folders that remain yellow the ones that the user or group does not have access to.



Next to the green folders are the permissions the user or group has on the folder, as well as an explanation of how access is derived—whether through “Group\_Finance,” the “everyone group,” etc.

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The second method is to simply run one of the Varonis DatAdvantage built-in reports, *Effective Permissions for User or Group*, specifying the user or group in question. This report (as with all DatAdvantage reports) can be run on demand, or scheduled to run and be delivered via email or share distribution automatically. The output lists each folder the user or group has access to, the user or group's permissions on the folder, and how the permissions are derived:

Access Path	User/Group	SAM Account Name	Inherited From	Current Permissions
C:\Share\finance\Normat	CORP\Group_Finance	Group_Finance	CORP\Group_Finance	MRLXW
C:\Share\finance\Normat\Data	CORP\Group_Finance	Group_Finance	CORP\Group_Finance	MRLXW
C:\Share\finance\Normat\EMail	CORP\Group_Finance	Group_Finance	CORP\Group_Finance	MRLXW
C:\Share\finance\Normat\emPackage	CORP\Group_Finance	Group_Finance	CORP\Group_Finance	MRLXW
C:\Share\finance\Normat\emPackage\Support	CORP\Group_Finance	Group_Finance	CORP\Group_Finance	MRLXW
C:\Share\finance\Normat\Package	CORP\Group_Finance	Group_Finance	CORP\Group_Finance	MRLXW
C:\Share\finance\Normat\Package\Support	CORP\Group_Finance	Group_Finance	CORP\Group_Finance	MRLXW
C:\Share\finance\Normat\tk2000	CORP\Group_Finance	Group_Finance	CORP\Group_Finance	MRLXW

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## ABOUT THE VARONIS METADATA FRAMEWORK

Ongoing, scalable data protection and management require technology designed to handle an ever-increasing volume and complexity—a metadata framework.

Four types of metadata are critical for data governance:

- User and Group Information – from Active Directory, LDAP, NIS, SharePoint, etc.
- Permissions information – knowing who can access what data in which containers
- Access Activity – knowing which users *do* access what data, when and what they've done
- Sensitive Content Indicators – knowing which files contain items of sensitivity and importance, and where they reside

The Varonis metadata framework non-intrusively collects this critical metadata, generates metadata where existing metadata is lacking (e.g. its file system filters and content inspection technologies), pre-processes it, normalizes it, analyzes it, stores it, and presents it to IT administrators in an interactive, dynamic interface. Once data owners are identified, they are empowered to make informed authorization and permissions maintenance decisions through a web-based interface—that are then executed—with no IT overhead or manual backend processes.

The Varonis Data Governance Suite will scale to present and future requirements using standard computing infrastructure, even as the number of functional relationships between metadata entities grows exponentially. As new platforms and metadata streams emerge, they will be seamlessly assimilated into the Varonis framework, and the productive methodologies it enables for data management and protection.

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## **VARONIS DATA GOVERNANCE SUITE**

Varonis provides a complete metadata framework and integrated product suite for governing unstructured data on file servers, NAS devices and (semi-structured) SharePoint servers. Varonis DatAdvantage, DataPrivilege, and the Data Classification Framework provide organizations the ability to effectively manage business data through actionable intelligence, automation of complex IT tasks, and sophisticated workflow management.

### ***Varonis DatAdvantage for Windows***

### ***Varonis DatAdvantage for UNIX/Linux***

### ***Varonis DatAdvantage for SharePoint***

DatAdvantage provides a single interface through which administrators can perform data governance activities.

- Visibility
  - Complete, bi-directional view into the permissions structure of unstructured and semi-structured file systems:
  - Displays data accessible to any user or group, and
  - Users and groups with permissions to any folder or SharePoint site
  - User and group information from directory services is linked directly with file and folder access control data
- Complete Audit Trail
  - Usable audit trail of every file touch on monitored servers
  - Detailed information on every file event in a normalized database that is searchable and sortable
  - Data collection performed with minimal impact to the file server and without requiring native Windows or Unix auditing
- Recommendations and Modeling
  - Actionable intelligence on where excess file permissions and group memberships can be safely removed without affecting business process
  - Model permissions changes without affecting production environments
- Data Ownership Identification
  - Statistical analysis of user activity effectively identifies business owners of data
  - Automated reports involve data owners in data governance processes
  - Facilitates round-trip data owner involvement via DataPrivilege

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### **Varonis DataPrivilege**

DataPrivilege automates data governance by providing a framework for users and data owners to be directly involved in the access review and authorization workflows. A web interface for data owners, business users, and IT administrators automates data access requests, owner and IT authorization of changes, automated entitlement reviews, and business data policy automation (e.g. ethical walls). A complete audit trail ensures that data governance policies are in place and being adhered to.

- Automated Entitlement Reviews
  - Data owners are provided scheduled entitlement reviews with recommendations for access removal (generated by DatAdvantage)
  - Reviews can be scheduled based on business policy
- Access Control Workflow
  - Users can request access to data and group resources directly, providing explanation and duration
  - Data owners and other stakeholders are automatically involved in authorization process
  - Permissions changes are carried out automatically once approval requirements are met
  - Permissions revocations are carried out automatically on their assigned expiration
- Business Policy Implementation
  - Multiple levels of authorization provide automated implementation of business and IT data governance policy
  - Ethical wall functionality enforces data access policies
- Complete Self-Service Portal
  - Data Owners can view and manage permissions on their data and groups without requiring elevated access privileges, if desired
  - Data Owners can view access activity and statistics about their data, if desired
- Complete Audit Trail and Reporting
  - All workflow events are recorded for audit and reporting which can prove the enforcement of governance practices
  - Authorizations, Entitlement reviews, and other management reports provide evidence of process adherence

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### Varonis Data Classification Framework

The Varonis Data Classification Framework gives organizations visibility into the content of data, providing intelligence on where sensitive data resides across its file systems. By integrating file classification information—from either the included classification engine or from a third-party classification product—alongside the rest of the Varonis metadata in the DatAdvantage interface, DCF enables actionable intelligence for data governance, including a prioritized report of those folders with the most exposed permissions AND containing the most sensitive data.

- Actionable Intelligence
  - Classification information provides visibility into business-critical content from within the Varonis IDU
  - Organizations can see where their most sensitive data is over-exposed along with actionable recommendations on where that access can be reduced
- Extensible Architecture
  - The provided data classification engine provides a powerful and flexible method for classifying sensitive data through regular expressions and dictionary searches.
  - The Data Classification Framework can also integrate content classification data from third-party classification and DLP products, extending the ability of both
  - Intelligent, fast
  - True incremental scanning is attained with DatAdvantage real-time knowledge of all file creations and modifications—only new data is classified
  - Produces rapid-time-to-value results that have a clear remediation path or “next step”
  - Produces results dramatically faster than traditional approaches
- Leverages existing infrastructure
  - Can use either its built-in classification engine or those already deployed
  - Uses the unique meta-data layer created by the Varonis Intelligent Data Use (IDU) Framework
  - Builds on the foundation of the Varonis IDU Framework, with no need for additional servers or storage
  - Results flow into Varonis DatAdvantage and Varonis DataPrivilege (*future*)
- Easy, powerful classification rules
  - Rules match a combination of content AND meta-data conditions (e.g. creator, accessing user, permissions sets)
  - Prioritization based on Varonis metadata (e.g. scan the most exposed folders first)
  - Files are searched for keywords, phrases and/or regular expression patterns
  - Dynamic/auto-updated dictionary matching capabilities

### Learn More

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