# Dynatrace Managed – Cluster Management Console

**Dynatrace Training Module** 

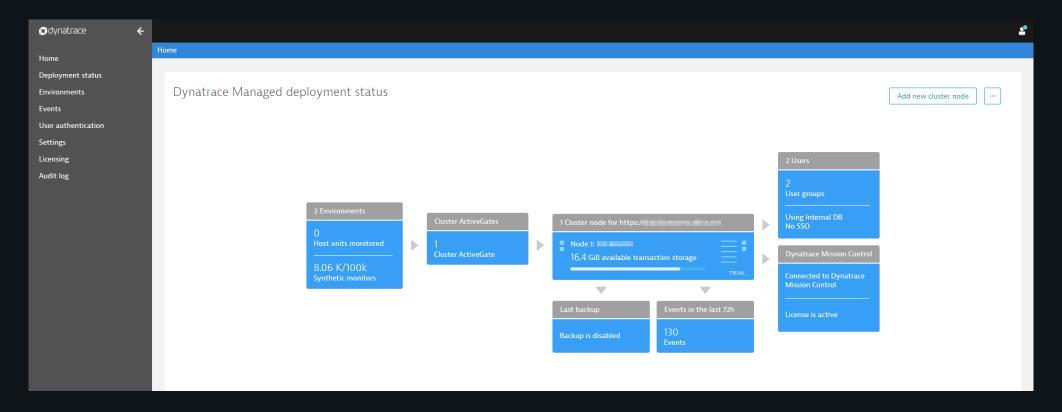


# Agenda

- Home
- Deployment Status
- Environments
- Events
- User Authentication
- Settings
  - Preferences Domain and Certificate Management
- Licensing
- Audit log

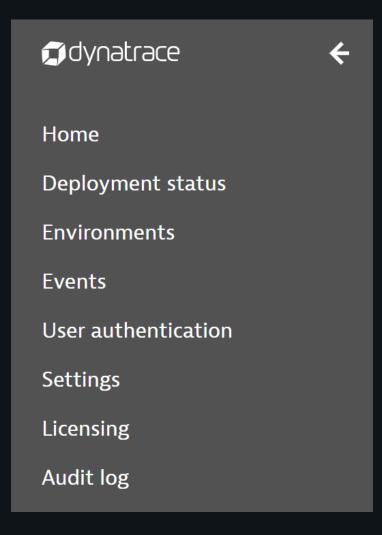
# Log into the Cluster Management Console (CMC)

- Access the Cluster Management Console (CMC) for your cluster
  - https://{clusterID}.dynatrace-managed.com



# **Main Menu**

• List of all views that can be accessed for configuration and analysis of cluster specific information



# Home



# Home

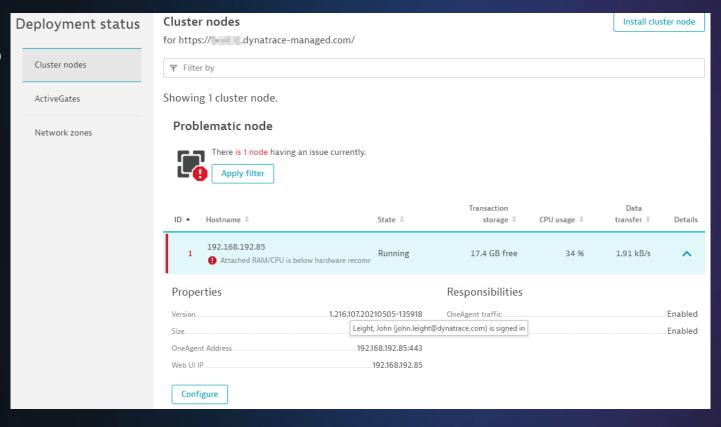
- Provides overall status of the cluster.
- Link to add new cluster nodes
- Link to add Cluster ActiveGates
- Click on any status box to link to details for the item



# Deployment Status

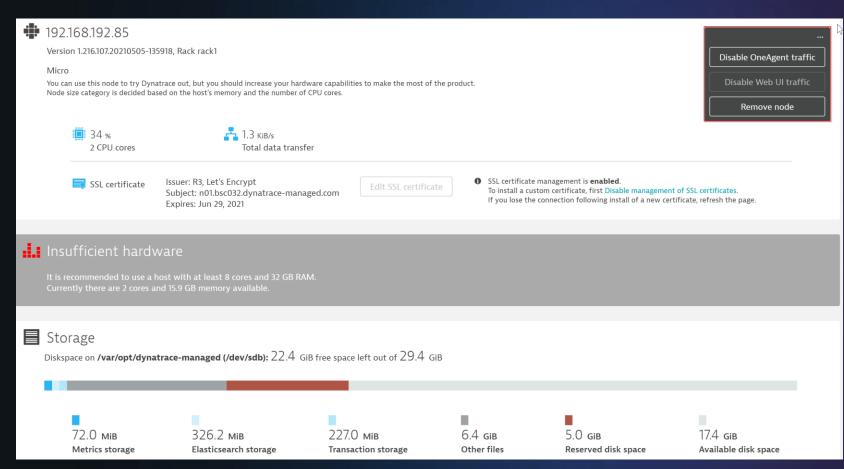
# **Deployment Status – Cluster Node Information**

- Select cluster nodes from the home screen Deployment status or Deployment Status -> Cluster Nodes to view more information
- Select a node to view the details
- Select Configure to view details about the node

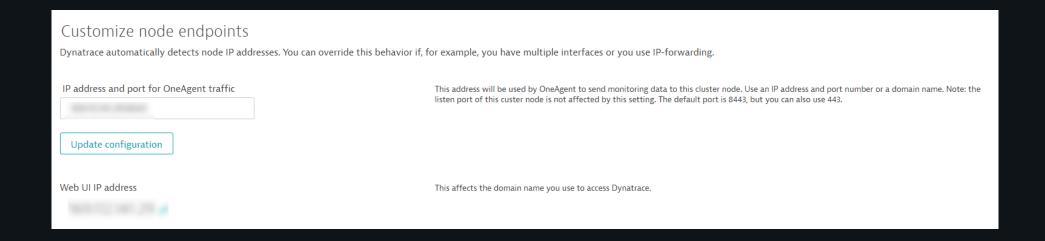


# **Deployment Status – Cluster Node Information**

- The ellipsis allows you to:
  - Disable OneAgent Traffic
  - Remove the Node
- Storage allocation and utilization can be viewed



# **Node Endpoints**

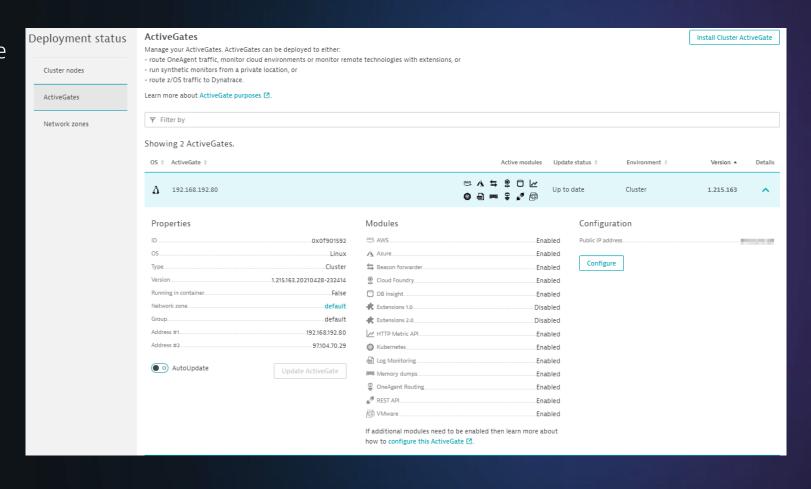


- Allows for customization of the node IP address and port number that the Cluster AG and the OneAgent connect to
- Allows for customization of Web UI IP address

# Deployment Status - ActiveGates

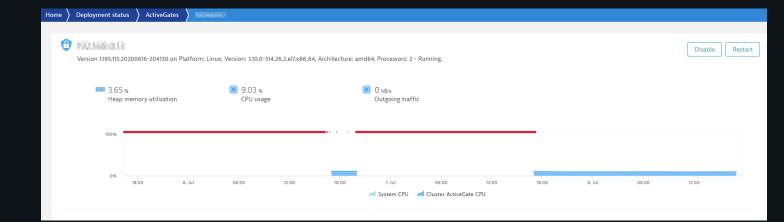
# **Deployment Status – ActiveGates Information**

- Select ActiveGates from the home screen or Deployment Status -> ActiveGates to view more information
- ActiveGate modules, type and version are listed in the table
- Select a node to view the details
- Select Configure to view details about the node



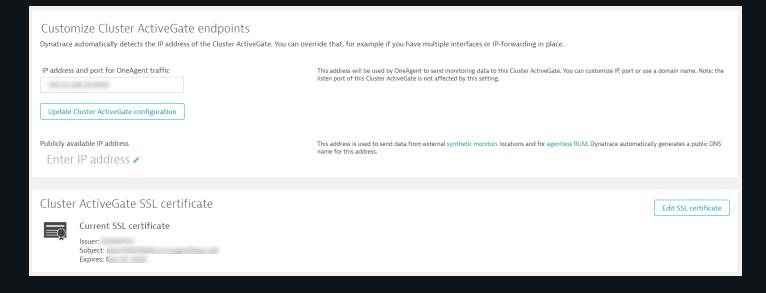
### **Cluster ActiveGates**

- Cluster ActiveGates are only managed through the CMC
- Environment Active Gates can be managed in the CMC or from the Environment
- Disable and Restart options are available
- Heap Memory Utilization, CPU Usage, and Outgoing Traffic of the Active Gate Host are displayed
- Allows for quick analysis of the infrastructure that the Active Gate is deployed on



# Cluster ActiveGate Configuration

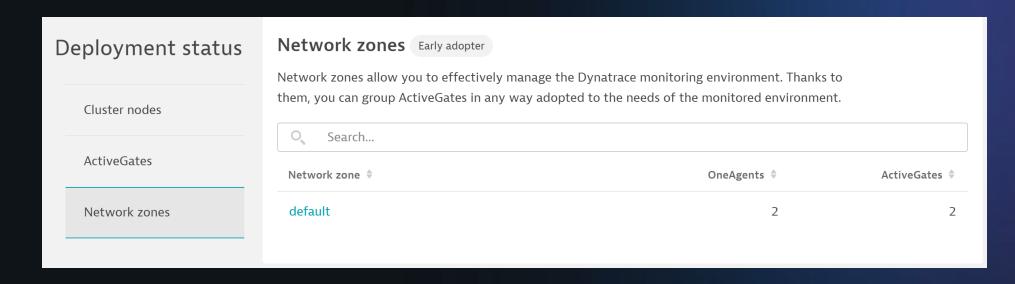
- Ability to customize the IP address and port number that the OneAgent uses to connect to the ActiveGate
- Ability to supply custom ActiveGate SSL Certificate
- If customer SSL certificate is not specified, Dynatrace will issue a valid certificate as long as the IP address of the AG is public



# Deployment Status – Network Zones

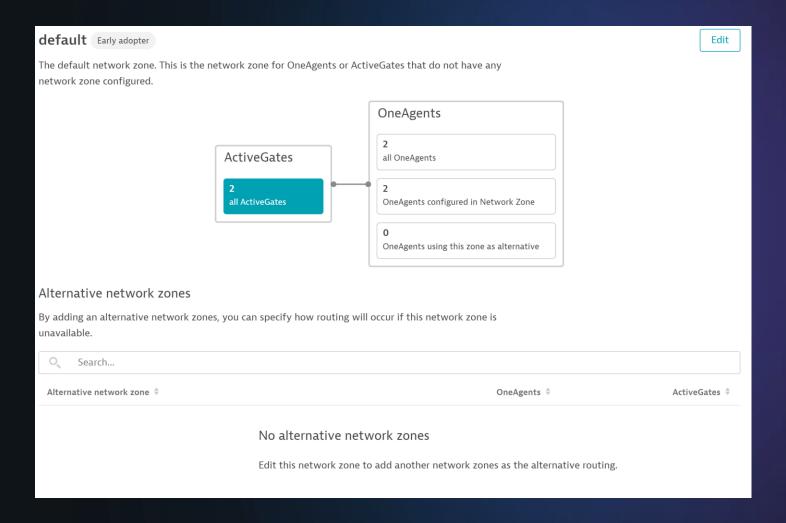
# **Deployment Status – Network Zone Information**

- Select Deployment Status -> Network Zones to view more information
- Network Zone names, Number of OneAgents and number of ActiveGates are listed
- Select a Network Zone to view the details



# **Deployment Status – Network Zone Information**

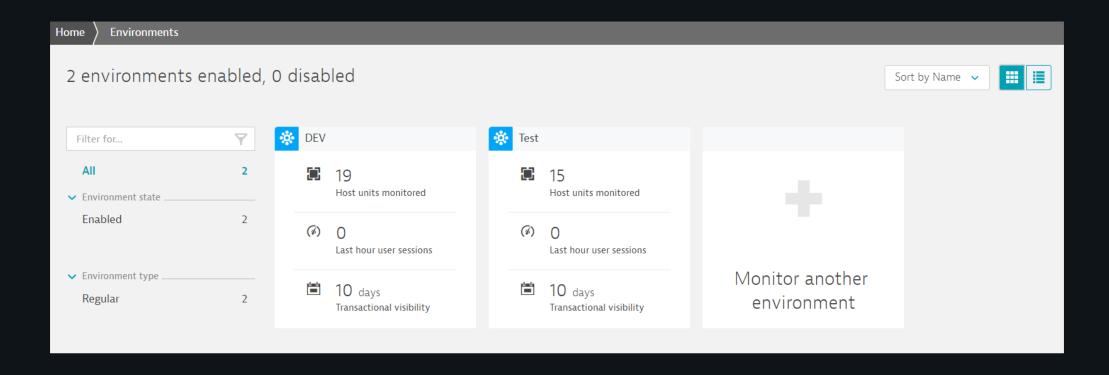
- Network Zone Details include
  - Infographic with details
  - Alternate Network Zones



# **Environments**

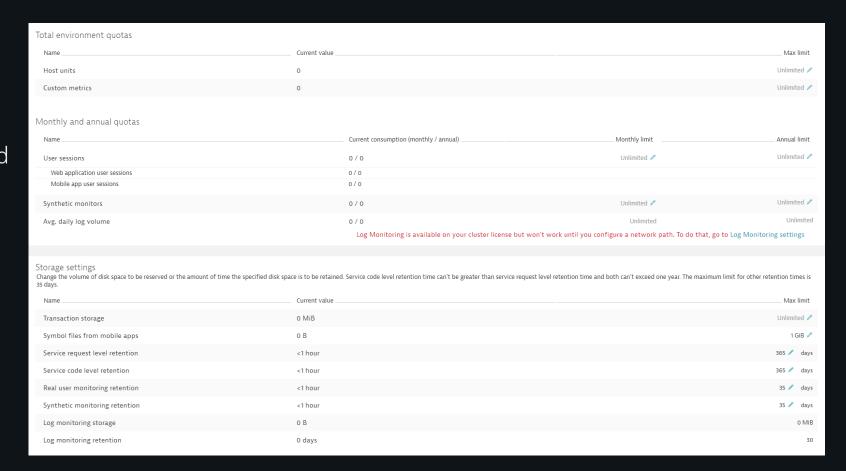
# **Environments**

- A list of environments are shown
- New Environments can be created



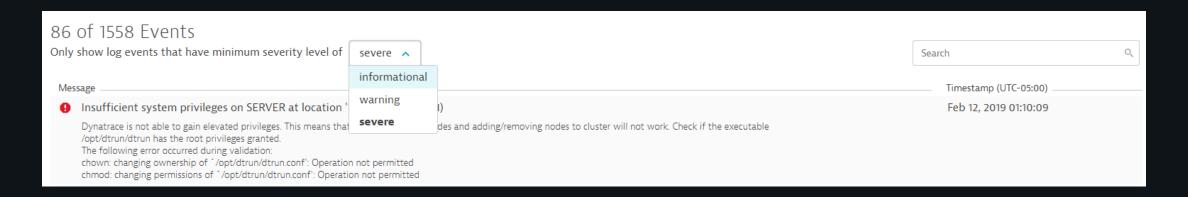
# **Environment Details**

- Environment License Quotas can be modified
- Environment data retention times can be viewed/changed



# **Events**

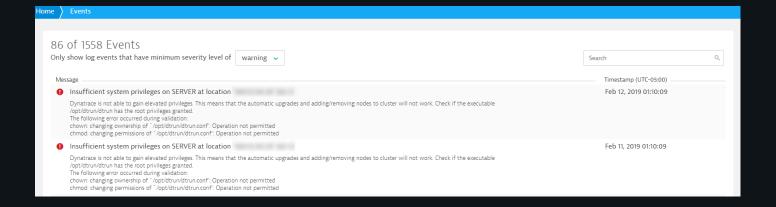
## **Event Types**



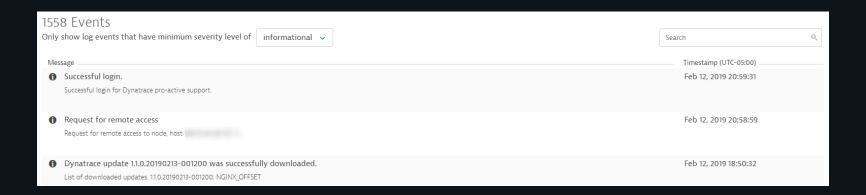
- There are 3 types of events:
  - Informational AG connectivity data, successful logins, etc...
  - Warning License check errors, insufficient privileges, etc...
  - Severe insufficient system privileges, shutdowns, etc...
- Some of the information can be displayed in both warning and severe categories

# **Warning & Severe Events**

- Great source of information to understand whether all of the infrastructure components of the cluster are performing as expected
- Can be used for debugging cluster related issues



# **Informational Events**



- Provides general information about the cluster
- Allows you to track statistics about the number of logins to the cluster as well as number of updates performed to the cluster

# **User Authentication**

### **User Authentication**

- User Account create users and assign users to groups
- User Groups Create Groups and assign permissions to environments and/or management zones
- User Sessions View and manage user sessions accessing the cluster
- Password Policy Customize the password policy when using the Internal Cluster Database
- User Repository Select whether to use the Internal Cluster
   Database or LDAP
- Single Sign-on Settings Configure SSO (Single sign-on) to use OpenID Connect or SAML 2.0
- Login Screen Customize the Dynatrace Cluster Login Screen

#### User authentication



#### User accounts

Manage users and group assignment

#### User groups

Manage user groups and access rights

#### User sessions

Manage and configure user sessions

#### Password policy

Configure user password complexity rules

#### User repository

Select user repository

#### Single sign-on settings

Configure single sign-on

#### Login screen

Configure login screen

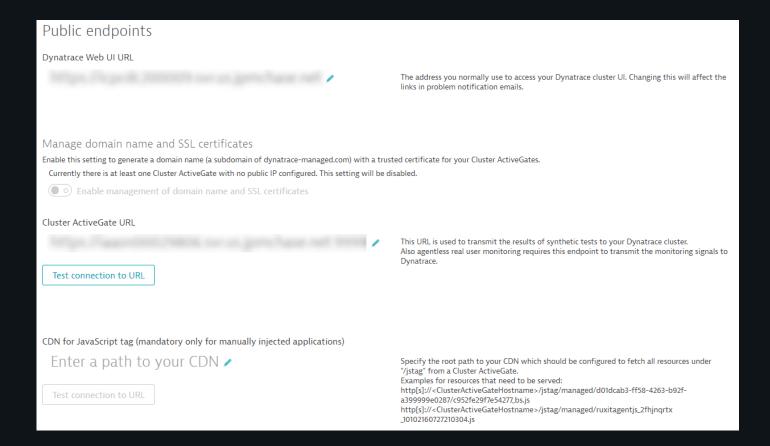
# **User Authentication – Special Notes**

- User Group and Permission Details: <a href="https://www.dynatrace.com/support/help/shortlink/managed-user-groups">https://www.dynatrace.com/support/help/shortlink/managed-user-groups</a>
- User Management via LDAP. After you switch to LDAP authentication
  - Local accounts (other than the administrator account) will stop working: it will be impossible to log in with a local account.
  - The administrator account you created during installation will continue to work regardless of the selected authentication provider.
  - LDAP configuration: <a href="https://www.dynatrace.com/support/help/shortlink/managed-ldap#connection-configuration">https://www.dynatrace.com/support/help/shortlink/managed-ldap#connection-configuration</a>
- LDAP Groups section can map LDAP groups to the Dynatrace User Groups
- SSO SAML 2.0 integration: <a href="https://www.dynatrace.com/support/help/shortlink/managed-saml#set-up-saml-20-integration">https://www.dynatrace.com/support/help/shortlink/managed-saml#set-up-saml-20-integration</a>
- OpenID integration: <a href="https://www.dynatrace.com/support/help/shortlink/managed-openid">https://www.dynatrace.com/support/help/shortlink/managed-openid</a>

# Settings

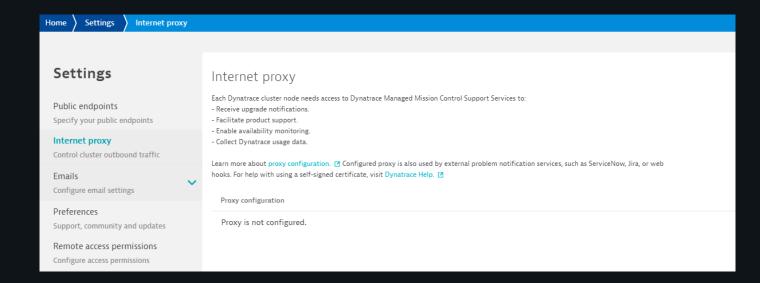
### **Public Endpoints**

- Dynatrace Web UI URL can be configured
- Dynatrace can generate an SSL certificate for your Cluster AGs as long as they all have publicly exposed IPs
- Cluster AG URL specifies a URL that the synthetic tests as well as agentless RUM use
- The CDN path is required for JavaScript tag for all of the manually injected applications
  - This will enable Dynatrace to fetch all of the CDN resources



# **Internet Proxy**

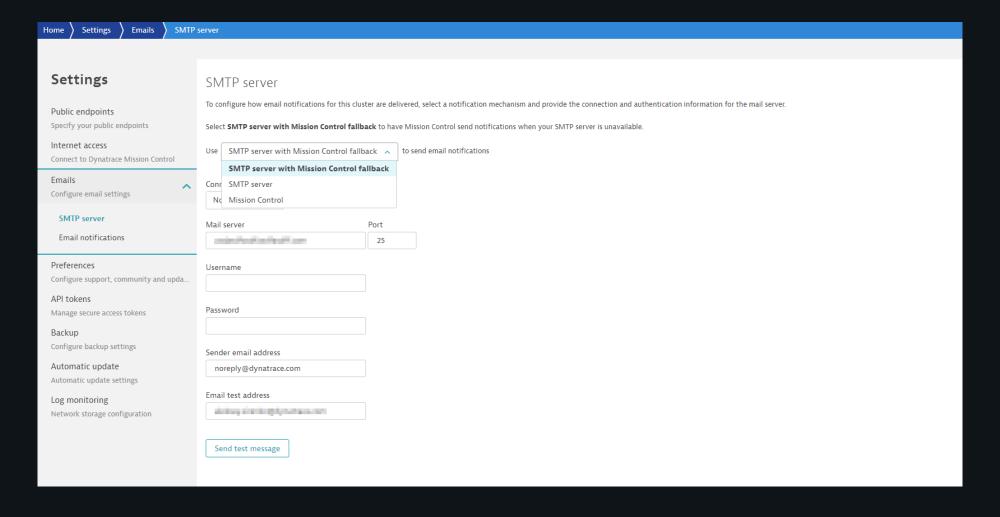
- Access to Dynatrace Managed Mission Control is required for:
  - Usage and billing information
  - Dynatrace cluster health
  - Dynatrace Cluster event reporting
  - Upgrade notifications and packages
  - Facilitating product support
- Configure a proxy for the Managed Cluster to communicate back to Mission Control if necessary
- <a href="https://www.dynatrace.com/support/help/s">https://www.dynatrace.com/support/help/s</a> hortlink/managed-support



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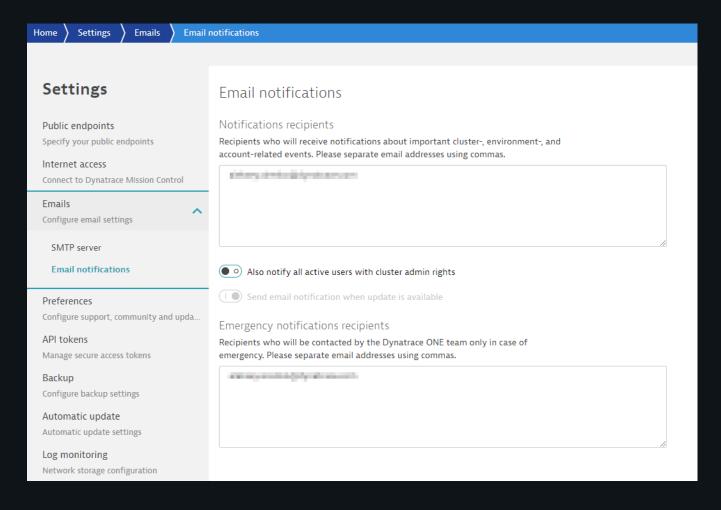
### **Emails – SMTP Server**

Configure the SMTP Server for cluster email notifications



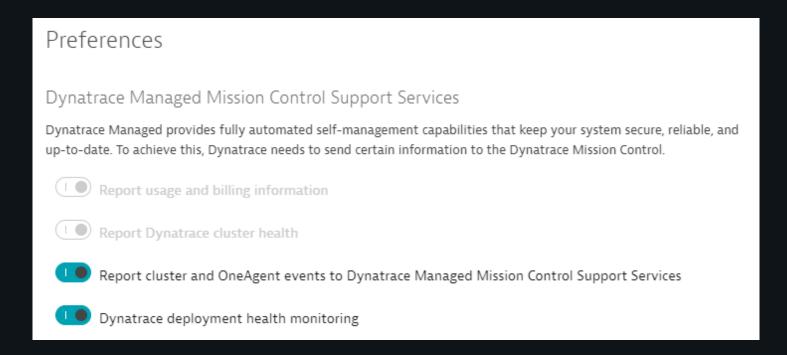
# **Emails - notifications**

• Setup recipients of email notifications for Managed events, including updates



# **Preferences – Pro-active support**

- To facilitate pro-active support, your Dynatrace server transmits status information to Dynatrace Mission Control
- Some information is optional



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# Preferences – Use and Integration

- Send information about monitored technologies to pro-actively support any incompatibilities or technology-specific risks.
- Select product integrations for chat, help and support.

Monitored technologies and product adoption

Dynatrace pro-actively alerts you to any incompatibilities or technology-specific risks related to your environment. We report information about OneAgents, code modules, process technologies, hosts, ActiveGates, and related entities for support, product improvement and research purposes.

Relevant logs are accessible on each cluster node at <datastore\_dir>\log\server\audit.rest.proxy.log.

Dynatrace companies (Dynatrace LLC and subsidiaries) operate globally. Data may be transferred to, and processed by cloud services in the United States and other locations. For details, see Dynatrace security policies and data-privacy settings.

Send information about monitored technologies and feature usage

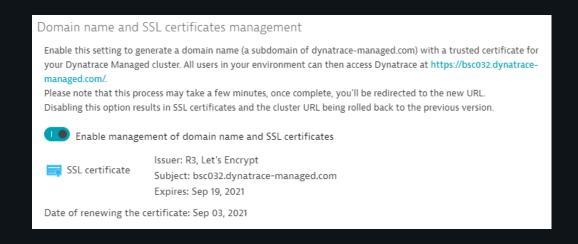
Dynatrace services and support

Dynatrace services and support ensure you get the most out of the Dynatrace Software Intelligence Platform. They include documentation, University, in-product chat, Community forum and support resources. You can read more at Dynatrace services and support website.

- Enable in-product Dynatrace ONE live chat
- Send users an invitation to the Dynatrace Community upon first login. Users will be able to ask questions in Dynatrace forums, access Dynatrace University and create Support tickets
- Integrate Dynatrace Help and Answers user forum content into search results

# Preferences – Domain name and SSL Certificate Management

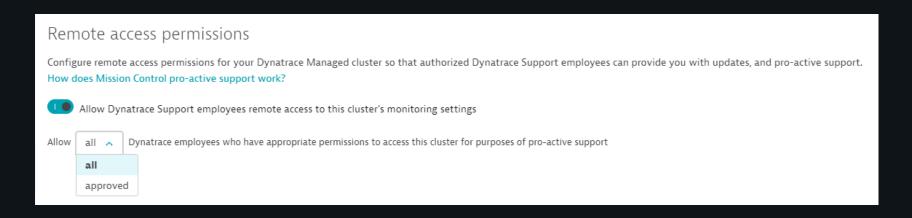
- The Dynatrace UI is only accessible over encrypted HTTPS connections.
- Allow automatic certificate management or provide your own.
- If disabled each cluster node and Cluster ActiveGate will need to be configured with a valid certificate
  - https://www.dynatrace.com/support/help/shortlink/managed-ssl



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### **Remote Access Permissions**

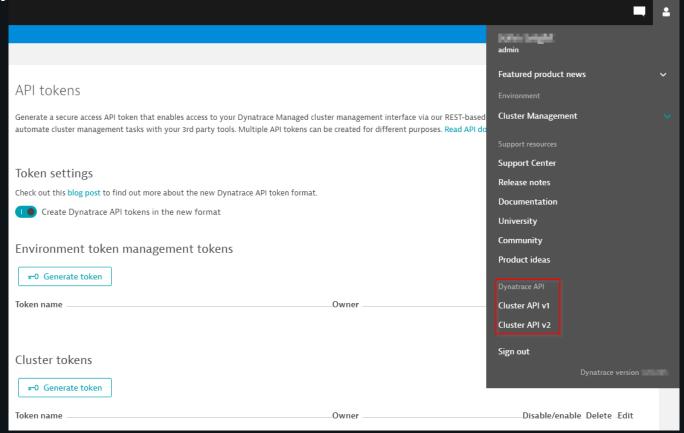
- Dynatrace ONE can assist you remotely with Dynatrace Managed cluster upgrades and troubleshooting when you run into problems.
- To make this happen, a Dynatrace ONE product specialist must have permission to remotely access your Dynatrace Managed cluster.
- You can configure remote access permissions for your Dynatrace Managed cluster to authorize Dynatrace ONE to provide you with updates and pro-active support.
  - <a href="https://www.dynatrace.com/support/help/shortlink/cluster-remote-access">https://www.dynatrace.com/support/help/shortlink/cluster-remote-access</a>



## **API tokens**

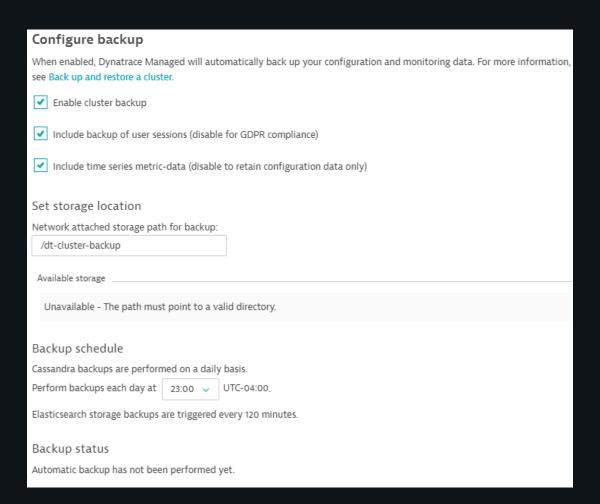
- Use the CMC API Tokens setting to manage cluster tokens
- Cluster APIs are available for easy automation of:
  - Environment Management
  - Configuration Management
  - Cluster Management
  - User/Group Management





## Backup

- Automatically backup the Dynatrace Cluster
- Determine what to backup
  - Cluster Configuration
  - User Sessions (consider GDPR)
  - Time-series metric data
- Define backup location
  - Shared cluster node NFS mount
- Define backup schedule
- <a href="https://www.dynatrace.com/support/help/shortlink/managed-cluster-restore">https://www.dynatrace.com/support/help/shortlink/managed-cluster-restore</a>

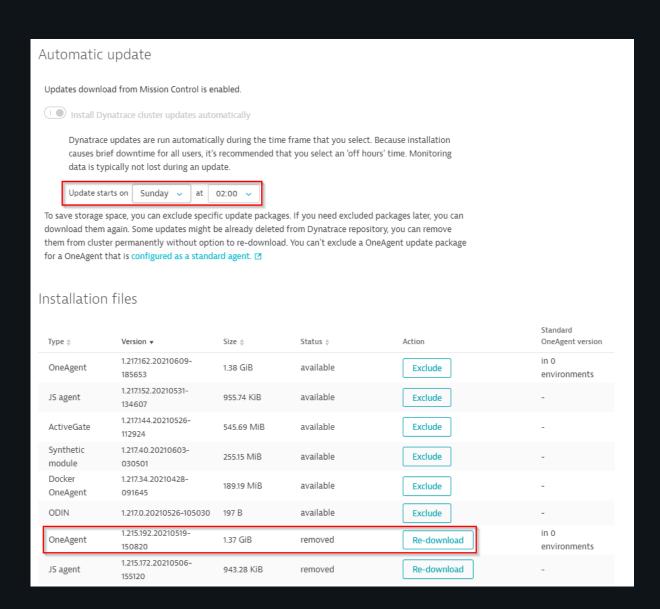


## **Backup Sizing**

- All important Dynatrace Server configuration files and monitoring data can be backed up automatically
- All cluster nodes should be accessing the same NFS share mounted as a filesystem on each node in the cluster
- The configuration files and Cassandra metrics are contained in an uncompressed tar archive, with one tar file per cluster node, which is updated daily
- Elasticsearch is contained in a snapshot file, which is updated hourly
- Transaction storage isn't backed up
- Backup history isn't preserved, so the Dynatrace Server keeps only the latest backup
- Network bandwidth utilization is limited to 30MB/s which is appropriate for 1 Gbps connections.
- <a href="https://www.dynatrace.com/support/help/shortlink/managed-cluster-backup-estimate">https://www.dynatrace.com/support/help/shortlink/managed-cluster-backup-estimate</a>
- Size of a cluster backup = ("sum of metrics storage on all nodes" x 0.20) + sum of elasticsearch storage on all nodes

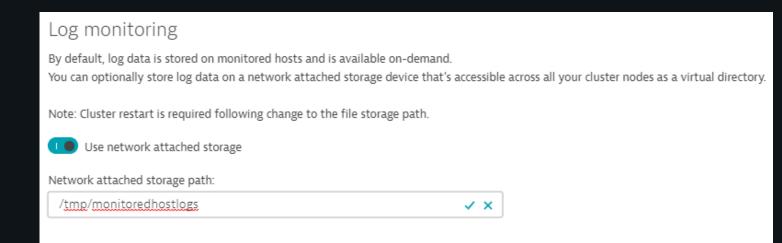
# **Automatic updates**

- Choose a convenient time to update the managed cluster off-hours.
- Multiple nodes will be upgraded one-by-one to maintain cluster availability
- Older update packages will be removed automatically
- To save storage space, you can exclude specific update packages



## Log Analytics

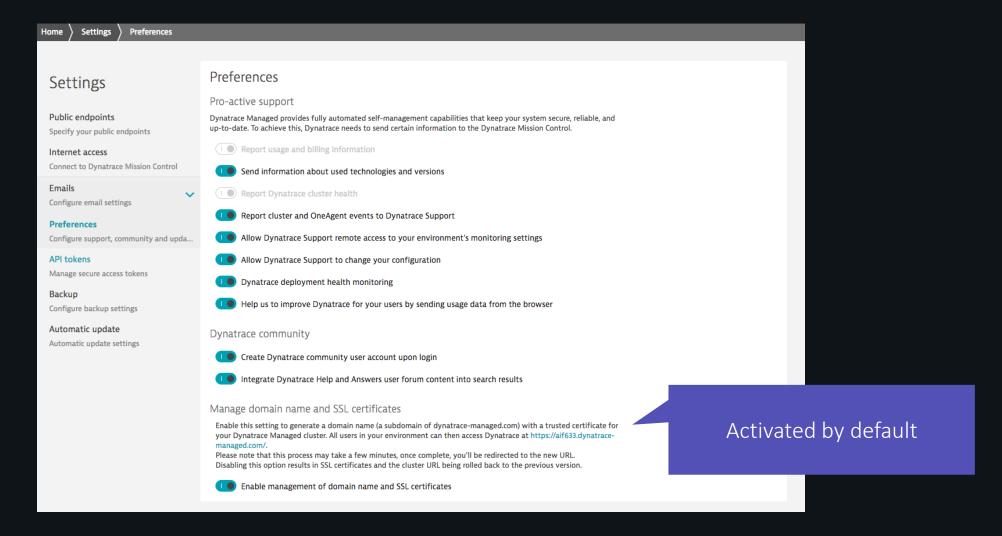
- Allow monitored host and process log file storage on the Dynatrace cluster
- Define patterns and custom log metrics
- Otherwise logs are only available as long as they are stored on the monitored hosts' disks
- https://www.dynatrace.com/support/h elp/shortlink/log-monitoring-hub



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# Domain and Certificate Management

## Let's start with the domain name name and cert management



### So what does it do?

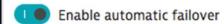
#### For the cluster UI

## Configure public endpoints

Dynatrace Web UI URL

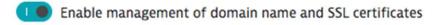
https://aif633.dynatrace-managed.com/ /

The address you normally use to access your Dynatrace cluster UI. Changing this will affect the links in problem notification emails.



Manage domain name and SSL certificates

Enable this setting to generate a domain name (a subdomain of dynatrace-managed.com) with a trusted certificate for your Security gateways.

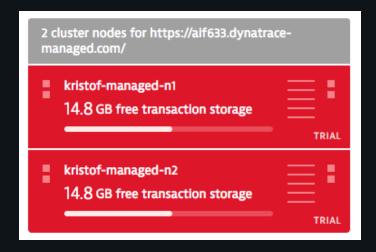


Generated Security gateway domain name: **ibp047.dynatrace-managed.com** IP addresses associated with this domain: **52.166.6.68** 

For the Cluster ActiveGate

## So what does it do?

- Creates a subdomain for dynatrace-managed.com
  - And a node subdomain: n[node-id].subdomain.dynatrace-managed.com
    - E.g.: <a href="https://n01.aif633.dynatrace-managed.com/">https://n01.aif633.dynatrace-managed.com/</a>

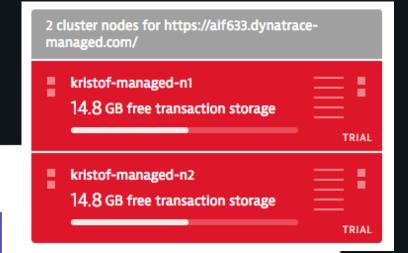


- Users can access the cluster through there
- The cluster nodes do not need to be exposed to the internet, only reachable by the user
- This subdomain is used in all emails, problem notifications sent by the cluster
- 3 month "Let's Encrypt" Certificates are generated and automatically renewed
- When DNS lookup is performed by the user, it will redirect to a particular node



#### In order for it to work

Subdomain generated for each node



kristof-managed-n1.westeurope.cloudapp.azure.com

This affects the domain name

Version 1.132.95.20171127-132916

kristof-managed-n1.westeurope.cloudap

n1.westeurope.cloudapp.azure.com:8443

Current DNS entry point set on this node: kristof-managed-

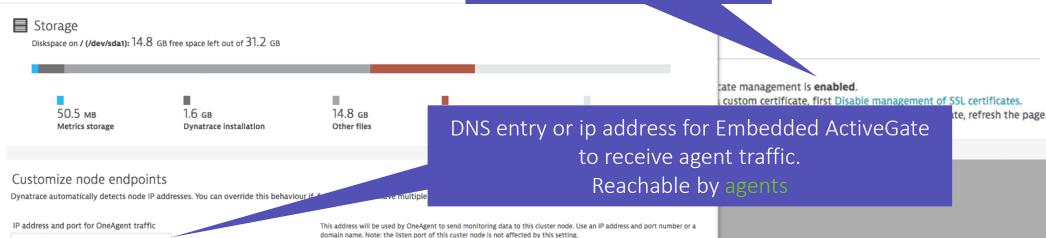
Update configuration

52.166.240.55

Web UI IP address

Size category of this node: TRIAL

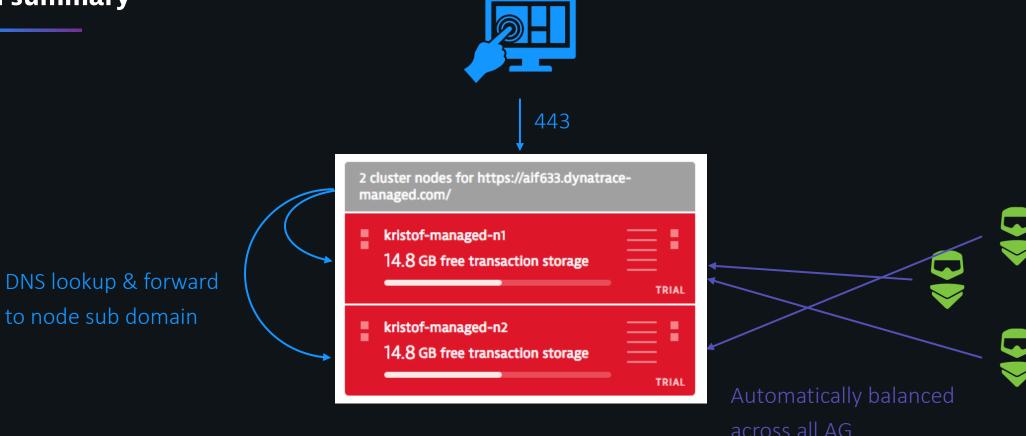
You can use this node to try Dynatrace out, but you should increase your hardware capa Node size category is decided based on the host's memory and the number of CPU cores Dynatrace can manage SSL certificate, disable to set own certificate



IP address for node subdomain redirect.

Reachable by Ul users

## In summary



# What if you want to control your DNS and Certificates?

- You can add your own certificates for each node
- And enter your own DNS name
- Load balancer included (Nginx)
- Note for custom load balancer: context root cannot be changed
  - Works: dynatrace.customerdomain.com
  - Does not work: customerdomain.com/dynatrace
- Load balancer config
  - Probing URL: /rest/health
  - Stickiness: HTTP cookie, any cookie not used by Dynatrace
  - Algorithm: least connections

## **Cluster ActiveGate**

- Public endpoint separated from the cluster nodes
- Reachable from the internet and correct certificate required
  - Domain and cert can also be managed by Dynatrace

#### 1 Security Gateway

kristof-managed-sgw.w esteurope.cloudapp.azu re.com

# **Setting it up**

DNS entry or ip address for AG to receive agent traffic.

Reachable by OneAgents

1 Security Gateway

kristof-managed-sgw.w esteurope.cloudapp.azu re.com

## Customi urity Gateway endpoints

Dynatrace auto Aically detects the IP address of the Security Gateway. You can override that, for example if you have multiple interfaces or IP-forwarding in place.

IP address and port for OneAgent traffic

kristof-managed-sgw.westeurope.clouda

Update Security gateway configuration

Publicly available IP address

52.166.6.68 /

IP address where Synthetic and Agentless RUM data is sent to. Public DNS name is managed elsewhere.

This address will be used by OneAgent to send monitoring data to this Security gateway. You can customize IP, port or use a domain name. Note: the listen port of this Security Gateway is not affected by this setting.

This address is used to send data from external synthetic web check locations and for agentless RUM. Dynatrace automatically generates a public DNS name for this address.

Manage domain name and SSL certificates

Enable this setting to generate a domain name (a subdomain of dynatrace-managed.com) with a trusted certificate for your Security gateways.

🚺 En

Enable management of domain name and SSL certificates

Generated Security gateway domain name: ibp047.dynatrace-managed.com IP addresses associated with this domain: 52.166.6.68

## Turning off domain and certificate management

Manage domain name and SSL certificates

Enable this setting to generate a domain name (a subdomain of dynatrace-managed.com) with a trusted certificate for your Security gateways.



Enable management of domain name and SSL certificates

Generated Security gateway domain name: ibp047.dynatrace-managed.com IP addresses associated with this domain: 52.166.6.68

Manage domain name and SSL certificates

Enable this setting to generate a domain name (a subdomain of dynatrace-managed.com) with a trusted certificate for your Security gateways.



Enable management of domain name and SSL certificates

Security Gateway URL

https://kristof-managed-sgw.westeurope.cloud...

This URL is used to transmit t your Dynatrace cluster. Also agentless real user monit to transmit the monitoring si

Custom DNS name that routes to Cluster ActiveGate (can be load balanced)

Test connection to URL

This Security Gateway can receive monitoring data from:

- Synthetic monitoring
- x external users of web applications (for agentless real user monitoring)
- x internal users of web applications (for agentless real user monitoring)
- externally deployed OneAgent installations

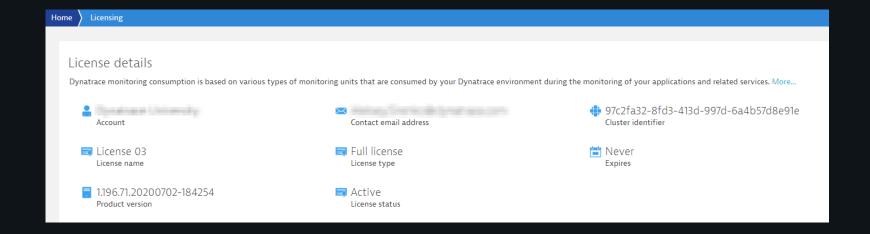
There were some SSL certificate problems detected. They need to be fixed to enable agentless real user monitoring.

Valid certificate required for Agentless RUM and Mobile App monitoring

# Licensing

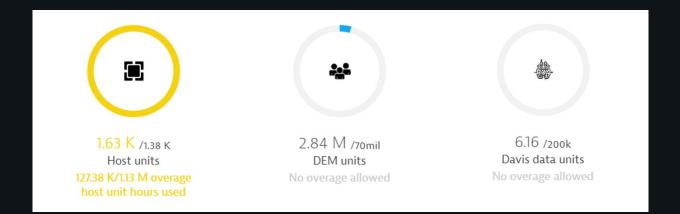
### **License Details**

- Displays the following:
  - Account Name
  - License Name
  - Server Version
  - License Type
  - License Status
  - Contact Email Address
  - Cluster Identifier
  - Expiration date



### License Details Cont.

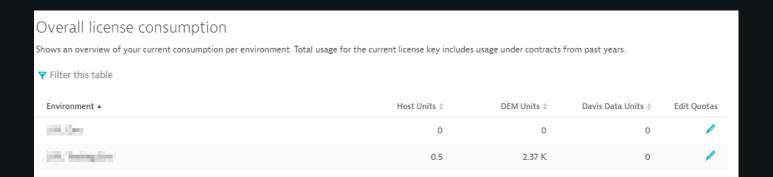
- Show the License Key
- Displays the license consumption and amount remaining for:
  - Host Units
  - DEM Units
  - Davis Data Units
- <a href="https://www.dynatrace.com/support/help/shortlink/monitoring-consumption">https://www.dynatrace.com/support/help/shortlink/monitoring-consumption</a>



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# **Overall License Consumption**

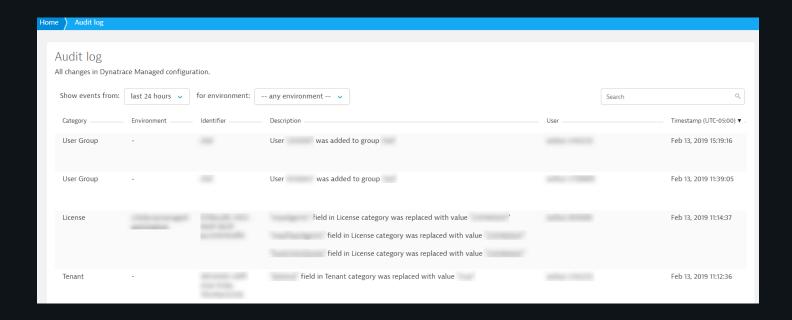
- Displays the overall license consumption per environment for the following metrics
  - Host Units
  - DEM Units
  - Davis Data Units
- Edit license quotas per environment



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# **Audit Log**

## **Audit Log**



- Allows for tracking changes performed within each monitoring environment
- Each change is associated to the username of the user that performed the change
- Helpful tool in tracking changes in environments

Questions?



Simply smarter clouds