

SiteAudit Consumables View

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The Consumable view was introduced in SiteAudit version 4.0 and has gone through some minor upgrades since. The Consumable view contains a data row for each consumable that is currently in use as well as one for each consumable that has been replaced. The view contains information to help users easily identify when consumables were replaced, what the level was when the consumable was replaced, what the current level is, when the consumable is expected to run out (or fill up in the case of Waste Toner and similar consumables). Reports can be produced from the Consumables view just as they can with any view in SiteAudit. So, it is possible to generate reports that show which consumables have been replaced, which consumables are expected to need replacement this week, etc.

Feature Overview

The Consumable view contains at least one row for each discovered consumable for each networked printer. One row is created for the consumable that is in use and a separate row exists for each replaced consumable. The status column contains the value "In Use" if the consumable is currently in use and "Replaced" if the consumable is no longer in use. The Level column indicates the current level for consumables that are "In Use" or indicates the level remaining for consumables that have been "Replaced." Figure 1 shows an example of a Consumable View and a description for each of the unique columns follows.

Figure 1 – Consumables View Sample

Serial #	Description	Type	Part Installed	Part Serial #	Level	Raw Level	Estimated Pages Rem...	Estimated Replacement Date	% Used	Consumable Status	Pages	Total
9415222	Magenta toner	Toner			67.0 %	67.0 %	4,673	3/17/2011	33.0 %	In Use	2,302	82,135
JPCGH16383	Yellow Cartridge HP...	Toner cartr...	4/8/2010	33637049	10.0 %	10.0 %	2,752	3/17/2011	5.0 %	In Use	1,376	155,718
0238667	Fotobromle: Magenta	Opc			36.0 %	36.0 %	17,216	3/17/2011	9.0 %	In Use	4,304	69,546
JPSNH16214	Black Cartridge HP ...	Toner cartr...	1/13/2011	33759993	89.0 %	89.0 %	18,641	3/17/2011	11.0 %	In Use	2,304	412,876
JPHPH03347	Image Transfer Kit ...	Transfer unit			9.8 %	9.8 %	11,401	3/17/2011	4.8 %	In Use	5,652	221,421
JPHFC45176	Black Print Cartridg...	Toner cartr...	12/21/2010	3294793	65.0 %	65.0 %	9,143	3/18/2011	33.0 %	In Use	4,642	227,957
JPKNH02747	Magenta Cartridge ...	Toner cartr...	11/16/2010	33759520	50.0 %	50.0 %	25,982	3/18/2011	20.0 %	In Use	10,393	350,974
JPKNH02683	Black Cartridge HP ...	Toner cartr...	12/16/2010	33825525	59.0 %	59.0 %	10,126	3/18/2011	30.0 %	In Use	5,149	309,091
CNDV83TGDB	Black Cartridge HP ...	Toner cartr...	12/22/2010	11674279	66.0 %	66.0 %	27,440	3/19/2011	33.0 %	In Use	13,720	149,820
JPKNH02949	Yellow Cartridge HP...	Toner cartr...	7/13/2010	33645483	20.0 %	20.0 %	14,330	3/19/2011	10.0 %	In Use	7,165	475,537
JPPNH05777	Yellow Cartridge HP...	Toner cartr...	5/19/2010	33638235	23.0 %	23.0 %	7,735	3/19/2011	9.0 %	In Use	3,027	128,901
JPKNH02688	Black Cartridge HP ...	Toner cartr...	12/15/2010	33638740	63.0 %	63.0 %	10,297	3/19/2011	31.0 %	In Use	5,067	439,580
JPKNH02670	Magenta Cartridge ...	Toner cartr...	9/21/2010	33702974	26.0 %	26.0 %	15,106	3/19/2011	13.0 %	In Use	7,553	422,797
JPKNH04481	Cyan Cartridge HP ...	Toner cartr...	12/15/2010	33825675	60.0 %	60.0 %	11,798	3/19/2011	30.0 %	In Use	5,899	587,697

Consumable View Column Descriptions

This section describes each of the columns that are unique to the Consumables View. Some of these columns may be hidden by default and can be added to the View using the Column Chooser that is available by right-clicking on a column header and selecting it from the menu options.

Description – This is the description of the consumable item. Some examples of descriptions are: Black Toner, Waste Toner, or Transfer Belt. Note that descriptions vary by manufacturer and model.

Type – This is the type associated with the consumable. For example, a toner cartridge is of type Toner. Other types include OPC, Transfer Belt, Fuser, etc.

Part Installed – This is the date when the consumable was installed. If this information is not supplied directly from the consumable item, this field will remain blank until SiteAudit has detected that the consumable was replaced. At that time, it will insert the current date for the newly installed consumable.

Part Serial # - This is the serial number associated with the consumable item. This information must be supplied by the device, otherwise the field remains empty.

Level – This is the current level detected by SiteAudit. This value is most often a percentage value. However, it is perfectly valid for printers to report the level as: Some, Empty, Unknown, or Other. In these cases, it is not possible for SiteAudit to display a percentage value for the consumable. Whether or not a printer reports percentage values depends on the printer manufacturer and model. In some cases, printers report both a percentage value when possible and a string value when it is not possible to determine a percentage. For example, some Ricoh printers will report a level of 100% for a new toner cartridge and as soon as some of the toner is used, the value reported is "Some." Whenever possible, SiteAudit always displays a percentage value.

Raw Level – Raw level shows the same percentage values as the Level column. However, in cases where the Level column displays a string such as, Some, Other, Unknown, etc., the Raw Level column will be blank. The purpose for having the Raw Level column is to help users sort by the level percentage. This can be done because the Raw Level contains decimal values whereas the Level column contains strings, which do not sort nicely. Note that the Raw Level column is hidden by default.

Capacity – The Capacity column indicates the capacity of the consumable. This value is typically represented in number of pages but may be 100 (percent) for some manufacturer/models.

Coverage – Coverage is the amount of toner that covers a sheet of paper. Many suppliers rate their cartridges by coverage, typically 5%. For example, a supplier may specify that a toner cartridge is expected to be able to print 10,000 pages at 5% coverage. This is not a lot of ink and if many graphics are printed, the coverage can increase considerably, thereby reducing the number of pages that can be printed with the cartridge.

Estimated Pages Remaining – This column contains an estimate of the number of pages that can be printed before the consumable is depleted or filled. This estimate is based on the current level and how much printing has occurred. The Estimated Pages Remaining column helps users identify when consumables are expected to need replacing. Note that this column remains blank until SiteAudit has sufficient data to estimate the number of remaining pages. To do this estimate, SiteAudit requires that the Level column contain a percentage value, and some number of pages must have been printed using the consumable. In SiteAudit 4.3, the Consumables Threshold contains a new condition that allows users to create an incident when the Estimated Pages Remaining reaches a specified point.

Estimated Replacement Date – This column indicates when a consumable item is expected to need replacement. This feature allows users to be proactive by quickly seeing when consumables are expected to run out. Reports can be generated to report information such as which consumables are expected to run out Today, Tomorrow, Next Week, etc. so that replacements can be delivered timely. To estimate an expected replacement date, SiteAudit requires that the Level column contain a percentage value, and some number of pages must have been printed using the consumable.

% Used – This column shows how much of the consumable has been used since SiteAudit began monitoring it. Note that it is NOT the case that the Level + % Used = 100% as might be expected. The reason for this is because many consumables do not start at 100% when SiteAudit monitoring began. For instance, suppose that SiteAudit started to monitor a consumable item and the first reading obtained indicates that the level is 70%. After some period of use, the % Used column shows the value 10% indicating that 10% of the toner has been used since monitoring started. In this case 70% + 10% does not equal 100% but the values are accurate. However, if the consumable level is 100% when SiteAudit is monitoring, then the % Used and Level will always equal 100%.

Consumable Status – This column indicates if a consumable item is currently in use or if it has been replaced. If a consumable has been replaced, the data for it no longer changes. This allows users to run reports that show what the levels were when a consumable was replaced, which may help to identify toner wastage.

Pages – This column contains the number of pages (yield) printed with a consumable. The Pages value for each cartridge increments by one for each printed impression. When SiteAudit detects that the cartridge has been replaced, the value of the Pages column is reset to zero so that the yield can be derived for the new consumable.

BW All, Color All, & Total – These columns contain the current values from the Lifetime Counter columns.

Common Columns - The Consumables view also contains columns that are common to all views such as, Manufacturer, Model, IP Address, Serial #, etc. To access all columns, select the Column Chooser by right-clicking on the column header and selecting it from the menu.

Consumable View Reports

As with all Views, the Consumables view can be customized to show precisely the data that is important to you. Reports can be generated, saved, printed, emailed, archived, published, or scheduled in any of the available formats: XML, XSL, RTF, CSV, HTML, PDF and more.

Figure 2 shows an example report that shows when consumable items are expected to need replacement. Users can generate this type of a report to indicate when consumables need to be replaced. This allows a user to be prepared by having the consumables ready to be replaced before the consumable runs out or fills up, as is the case for a waste toner.

Figure 2: Sample Consumables Report – Estimated Replacement Dates

A	B	C	D	F	H	I	J	K	L	N	O
IP Address	Description	Type	Level	Capacity	Estimated Pages Remaining	Estimated Replacement Date	Part Installed	Pages			
10.22.74.2	Print Cartridge	Toner	77.0 %	100	13,340	5/8/2011	3/25/2011	2,079			
10.162.10	Black Cartridge HP Q5942A	Toner cartridge	48.0 %	10000	3,186	5/8/2011	2/18/2011	3,386			
10.165.38	Black Cartridge HP Q6470A	Toner cartridge	51.0 %	6000	2,641	5/8/2011	2/24/2011	2,486			
10.162.12	Canon GPR-31 Yellow Toner	Toner	37.0 %	5700	9,225	5/8/2011	1/24/2011	15,708			
10.162.10	GPR-20 Magenta Toner	Toner	57.0 %	1700	34,347	5/8/2011	3/3/2011	25,309			
10.193.21	Black Cartridge HP CC364A	Toner cartridge	58.0 %	10000	6,439	5/8/2011	3/3/2011	4,663			
10.164.25	Magenta Cartridge HP Q5953A	Toner cartridge	16.0 %	10000	3,456	5/8/2011	9/15/2010	18,144			
10.164.3.1	Black Print Cartridge HP C9720A	Toner cartridge	52.0 %	9000	6,245	5/8/2011	2/24/2011	5,645			
10.168.68	Cyan High Capacity Toner Cartridge,	Toner	58.0 %	1190	12,214	5/8/2011	3/4/2011	8,639			
10.165.34	Black Toner Cartridge2	Toner	25.0 %	30000	29,482	5/8/2011	12/7/2010	88,447			
10.168.3.1	Imaging Unit, Phaser 6300/6350, PN	Opc	42.0 %	100	16,628	5/8/2011	2/11/2011	20,983			
144.14.25	Yellow Print Cartridge HP C9722A	Toner cartridge	57.0 %	8000	8,083	5/8/2011	3/3/2011	5,956			
144.14.20	Cyan Cartridge HP Q5951A	Toner cartridge	44.0 %	10000	6,068	5/8/2011	2/9/2011	7,585			
172.19.41	Cyan Cartridge HP Q5951A	Toner cartridge	84.0 %	10000	22,899	5/8/2011	3/24/2011	3,544			
172.19.53	Black Print Cartridge HP C9730A	Toner cartridge	48.0 %	13000	5,385	5/8/2011	2/18/2011	5,722			
172.19.16	GPR-20 Yellow Toner	Toner	68.0 %	1700	34,733	5/8/2011	3/18/2011	11,748			
10.64.10.2	Cyan High Capacity Toner Cartridge,	Toner	55.0 %	1190	15,858	5/8/2011	2/18/2011	4,019			
10.68.31.2	Yellow Toner Cartridge	Toner	78.0 %	100	16,107	5/8/2011	2/3/2011	3,304			

Filtering the Consumables View using the Level Column

Often, users want to filter the Consumables view to show only consumables whose level is below a specified amount, say 20%. The Consumables view contains two columns related to the consumable level, *Level* and *Raw Level*. The *Level* column is a text column that contains percentage values as well as strings that represent the level such as, Some, Other, Empty, or Unknown. Due to the behavior of strings, filtering on the Level column may not produce the expected results and thus is not recommended. This is because string filtering algorithms compare the first characters of each string. Therefore, if one filters to show consumables whose *Level* is less than 20%, then the view will also contain consumables whose level is 100%. This is because the first character "1" is less than the first character in the 20% filter criteria "2". See Figure 3 that shows an example of this. Notice that the view was filtered to show consumables whose level is less than 20% but the view also shows those whose level is 100%. For this reason, it is always best to filter based on the *Raw Level* column, which is hidden by default.

Manufacturer	IP Addr...	Serial #	Description	Type	Level	% Used	Capacity	Estimated Replacement D...	Estimated Pages Re...	Pages
Konica Minolta	10.250...	9031401...	Imaging Unit (Cyan)	Opc	18.0 %	27.0 %	100.00	11/3/2011	36,118	54,178
Konica Minolta	10.250...	9031401...	Imaging Unit (Magenta)	Opc	18.0 %	27.0 %	100.00	11/3/2011	36,118	54,178
Konica Minolta	10.250...	0021801...	Toner (Black)	Toner	18.0 %	82.0 %	100.00	5/29/2011	108	496
OKI Data	10.250...	68GF400...	Image Drum Unit Olivetti	Opc	18.4 %	71.5 %	20000.00	7/27/2011	3,678	14,313
OKI Data	10.250...	68GF400...	Image Drum Unit Olivetti	Opc	18.6 %	71.5 %	20000.00	7/28/2011	3,715	14,313
KYOCERA MITA	10.250...	XFL0600825	D-COLOR P226 MS	Toner	19.0 %	78.0 %	5000.00	7/24/2011	888	3,648
OKI Data	10.250...	7BGD400...	Belt Unit Olivetti	Transfer ...	19.3 %		60000.00			2,260
Hewlett-Packard	10.250...	CN44K51...	magenta ink	Ink	19.6 %	12.5 %	280.00	5/29/2012	1,180	751
OKI Data	10.250...	74FZ402...	Belt Unit Olivetti	Transfer ...	19.7 %		60000.00			2,115
	FE80:00...		Belt Unit OKI DATA CORP	Transfer ...	19.9 %		60000.00			450
KYOCERA MITA	10.250...	014091	1	Other	100.0 %		1.00			
KYOCERA MITA	10.250...	014091	1	Other	100.0 %		1.00			
OKI Data	10.250...	74FZ402...	Toner Cartridge Olivetti	Toner	100.0 %	0.0 %	100.00			330
KYOCERA MITA	10.250...	000000	1	Other	100.0 %	0.0 %	1.00			4,301

[Consumable Status] = 'In Use' And [Level] <= '20' %

Figure 3: Consumables filtered by the "Level" column <= 20%

Filtering Based on the Raw Level Column

The "Level" column of the Consumables view describes the level for a particular consumable. This is represented by a string that either describes the level in a decimal percentage format or a string such as Empty, Low, Some, or Unknown (some printers do not provide a decimal percentage but instead offer a text string.) Since the column consists of decimal and string values, normal filtering comparisons will not work as expected. For example, filtering where "Level < 20.0 %" will not behave as desired because a string comparison is performed and values such as "100.0 %" will be returned as shown in Figure 3.

To work around this issue, a column named "Raw Level" was added such that *proper numeric filtering can be performed on the consumable level*. This column contains only the decimal values that represent the percentage levels. The value is blank if the level is a string such as Empty, Low, Some, or Unknown. The "Raw Level" column is hidden by default and does not need to be visible in the view in order to filter upon it. Figure 4 shows an example of filtering based off the Raw Level column.

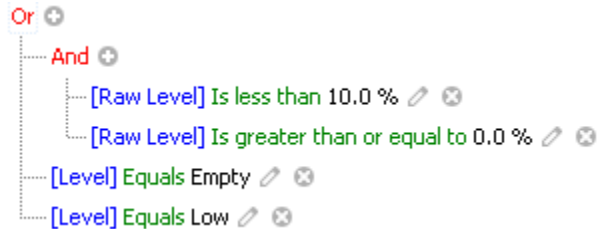
Figure 4: Filtering based on "Raw Level" column <= 20%

Manufacturer	IP Addr...	Serial #	Description	Type	Level	Raw Le...	% Used	Capacity	Estimated Replacement...	Estimated Pages ...	Pages
Konica Minolta	10.250...	0021801...	Toner (Black)	Toner	18.0 %	18.0 %	82.0 %	100.00	5/29/2011	108	496
OKI Data	10.250...	68GF400...	Image Drum Unit Olivetti	Opc	18.4 %	18.4 %	71.5 %	20000.00	7/27/2011	3,678	14,313
OKI Data	10.250...	68GF400...	Image Drum Unit Olivetti	Opc	18.6 %	18.6 %	71.5 %	20000.00	7/28/2011	3,715	14,313
KYOCERA MITA	10.250...	XFL0600...	D-COLOR P226 MS	Toner	19.0 %	19.0 %	78.0 %	5000.00	7/24/2011	888	3,648
OKI Data	10.250...	7BGD40...	Belt Unit Olivetti	Transfer...	19.3 %	19.3 %		60000.00			2,260
Hewlett-Packard	10.250...	CN44K5...	magenta ink	Ink	19.6 %	19.6 %	12.5 %	280.00	5/29/2012	1,180	751
OKI Data	10.250...	74FZ402...	Belt Unit Olivetti	Transfer...	19.7 %	19.7 %		60000.00			2,115
	FE80:0...		Belt Unit OKI DATA CORP	Transfer...	19.9 %	19.9 %		60000.00			450
KYOCERA MITA	10.250...	XFL0600...	D-COLOR P226 KS	Toner	20.0 %	20.0 %	76.0 %	6000.00	7/29/2011	960	3,648
Konica Minolta	10.250...	8120901...	Cyan Toner Cartridge	Toner	20.0 %	20.0 %	43.0 %	100.00	9/16/2011	8,021	17,247
Konica Minolta	10.250...	8120901...	Black Toner Cartridge	Toner	20.0 %	20.0 %	67.0 %	100.00	8/6/2011	5,148	17,247
OKI Data	10.250...	AK03025...	Toner Cartridge Olivetti	Toner	20.0 %	20.0 %	50.0 %	100.00	8/11/2011	1,896	4,742
OKI Data	10.250...	AK04042...	Toner Cartridge Olivetti	Toner	20.0 %	20.0 %	30.0 %	100.00	5/21/2011	200	300
OKI Data	10.250...	AK04042...	Toner Cartridge Olivetti	Toner	20.0 %	20.0 %	30.0 %	100.00	5/21/2011	200	300

[Consumable Status] = 'In Use' And [Raw Level] > '0.0 %' And [Raw Level] <= '20.0 %'

Examples

Create a filter where Level is less than 10% or equal to "Empty" or "Low".



1. Open the Filter Editor by clicking the "Edit Filter" button at the bottom right corner of the Consumables view.
2. Click on the red "And" text at the root level and select "Add Group".
3. Click on the same red "And" text at the root level and select "Or".
4. Modify the default rule created to "[Raw Level] Is less than 10.0 %".
5. Click on the "+" icon next to "And" and create another rule "[Raw Level] Is greater than 0.0 %".

NOTE: This rule is necessary since blank values evaluate to being less than 0.




6. Click on the "+" icon next to "Or" at the top level and create another rule "[Level] Equals Empty".
7. Click on the "+" icon next to "Or" at the top level again and create another rule "[Level] Equals Low".

Customizing the Consumables View

This section describes some ways in which the Consumables view can be filtered and organized to display the desired information under different scenarios.

1. How many consumables were replaced during the past quarter?




- a. Filter view on **Consumables Status = Replaced**

And 
[Consumable Status] Equals Replaced  

- b. Select time span = **Last quarter**
- c. Choose appropriate department

2. How many pages were printed with all consumables during the past quarter?








- a. Filter by **Pages > 0**

And 
[Pages] Is greater than 0  

- b. Select time span = **Last quarter**
- c. Choose appropriate department
- d. Aggregate Pages column on **SUM**

3. How many consumables are in use and need to be replaced soon (have less than 5% toner remaining)?

- a. Filter by
 - i. **Raw Level > 0**
 - ii. **Raw Level < 5**
 - iii. **Consumable Status = In Use**

And 
[Raw Level] Is greater than 0.0 %  
[Raw Level] Is less than or equal to 5.0 %  
[Consumable Status] Equals In Use  

- b. Select time span = **All**
- c. Choose appropriate department

4. Which consumables were installed this year?

a. Filter by

- i. Part Installed > **1/1/2010**
- ii. Part Installed <= **3/1/2010**

And ⊕

[Part Installed] Is greater than or equal to 1/1/2010 ✎ ⊗
[Part Installed] Is less than or equal to 3/31/2010 ✎ ⊗

b. Select time span = **This year**

c. Select appropriate department

Consumables View - Data

The Consumables View contains 35 data columns. Some of the key columns are listed below:

- Raw Level %
- Level
- Coverage
- Capacity
- Estimated Pages Remaining
- Pages (Yield)
- Coverage (Toner HP & Lexmark)
- Supplies Description
- Supplied Type
- Part Number
- Serial Number
- Installation Date
- Status (In-Use or Replaced)
- Device Status
- Manufacturer
- Model
- Output Type
- Other Asset Details...

User can filter on any column to data mine the specific information requested.

Saving Views

New flexibility in View operations allow users to filter a Consumables View and then save it. For example the filter 'Less than 10% including Empty and Low':

Or ⊕
And ⊕
[Raw Level] Is less than 10.0 % ✎ ⊗
[Raw Level] Is greater than or equal to 0.0 % ✎ ⊗
[Level] Equals Empty ✎ ⊗
[Level] Equals Low ✎ ⊗

Can be Saved to a folder and later retrieved to open this filtered View.

Steps:

- 1- Create a Filter using Edit Filter
- 2- Go to File → Save As
- 3- Provide a name to the .view file
- 4- Save

Reporting on Consumables

Reporting on consumables is essential to a well managed environment. Users have several options for creating and delivering consumables reports.

Steps:

1) It starts with selecting a Consumables View. Either select one of the pre-configured views or create a new view

2) Select the file format for the report e.g. PDF, XLS, CSV etc...

3) Select the delivery of the report:

- Published as a web report now
- Published and Scheduled as a web report (automatically refreshes with new data)
- Scheduled and emailed
- Emailed Now
- Archived
- Print Now

Users may modify a report's appearance by editing the header, footer and adding logo and company information.

For more details about creating a report see the *Working with Reports* Knowledge Base article