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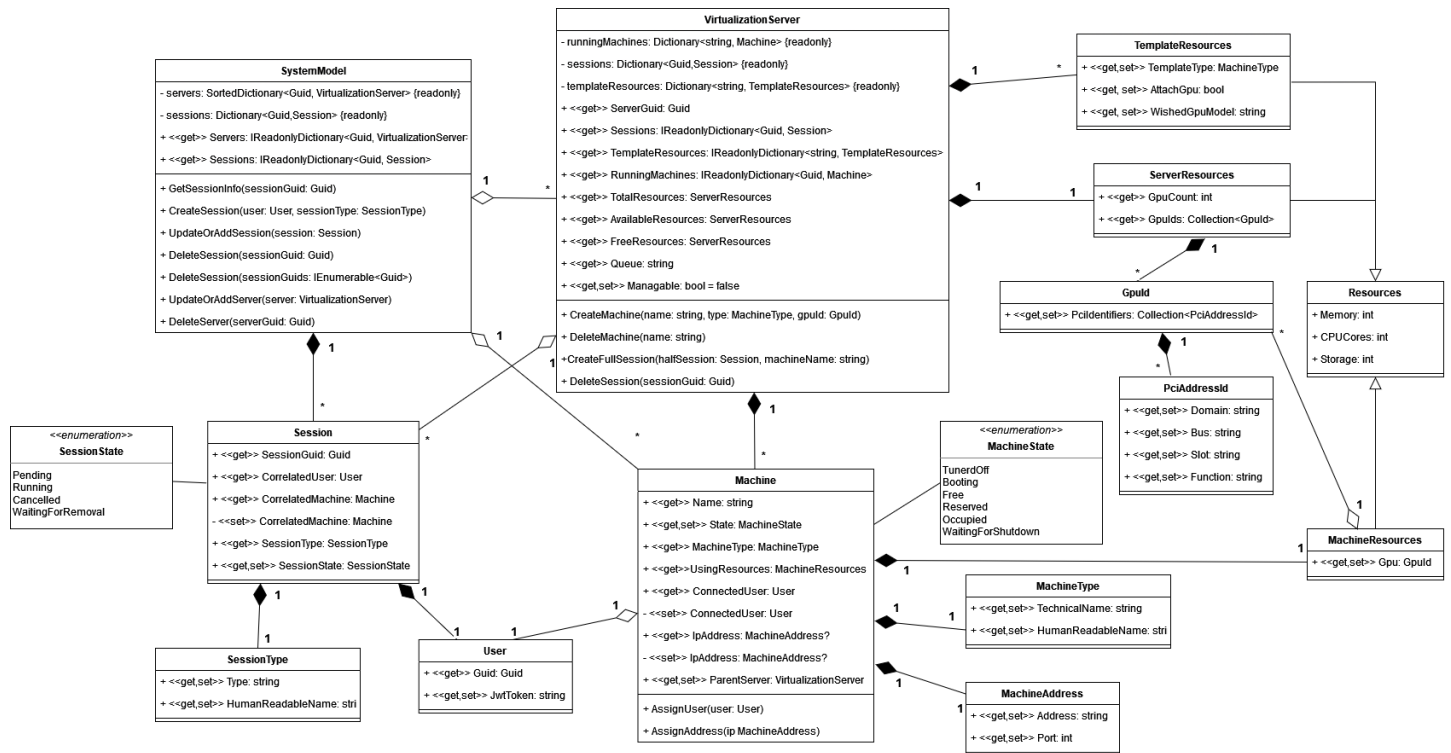
# OneClickDesktop Backend Classes

C# library containing common classes used by other modules.

Model created by this library contains information about:

- Available virtualization servers.
- Available resources on servers.
- Currently running machines and resources used by them.
- Sessions in global view and per virtualization server.

Library also provides classes for data transfer objects used in RabbitMQ communication by other modules (suffix **RDTO**).



# Namespace OneClickDesktop.BackendClasses.Communication

Classes

[TypeMappings](#)

Contains mapping from names to message types. Required for RabbitMQ communication

# Class TypeMappings

Contains mapping from names to message types. Required for RabbitMQ communication

Inheritance

System.Object  
TypeMappings

Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Communication](#)

Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public static class TypeMappings
```

Properties

## OverseerReceiveMapping

Contains mapping from names of messages received by overseer to types of data in message body

Declaration

```
public static IReadOnlyDictionary<string, Type> OverseerReceiveMapping { get; }
```

Property Value

TYPE	DESCRIPTION
System.Collections.Generic.IReadOnlyDictionary<System.String, System.Type>	

## VirtualizationServerReceiveMapping

Contains mapping from names of messages received by virtServer to types of data in message body

Declaration

```
public static IReadOnlyDictionary<string, Type> VirtualizationServerReceiveMapping { get; }
```

Property Value

TYPE	DESCRIPTION
System.Collections.Generic.IReadOnlyDictionary<System.String, System.Type>	

# Namespace

## OneClickDesktop.BackendClasses.Communication.MessagesTemplates

### Classes

#### [DomainShutdownTemplate](#)

Describes common part of machine shutdown request sent from overseers to virtServers

#### [DomainStartupTemplate](#)

Describes common part of machine startup request sent from overseers to virtServers

#### [ModelReportTemplate](#)

Describes common part of model report message sent from overseers to virtServers

#### [PingTemplate](#)

Describes common part of machine shutdown request sent from overseers to virtServers

#### [SessionCancelTemplate](#)

Describes common part of session cancellation request sent from overseers to virtServers

#### [SessionCreationTemplate](#)

Describes common part of session creation request sent from overseers to virtServers

# Class DomainShutdownTemplate

Describes common part of machine shutdown request sent from overseers to virtServers

## Inheritance

System.Object  
DomainShutdownTemplate

## Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Communication.MessagesTemplates](#)

Assembly: OneClickDesktop.BackendClasses.dll

## Syntax

```
public class DomainShutdownTemplate
```

## Fields

### MessageType

Type of message body - used to properly cast after deserialization

## Declaration

```
public static readonly Type MessageType
```

## Field Value

TYPE	DESCRIPTION
System.Type	

### MessageTypeNames

Message name - used to recognize package type

## Declaration

```
public const string MessageTypeNames = "DomainShutdown"
```

## Field Value

TYPE	DESCRIPTION
System.String	

## Methods

### ConversionReceivedData(Object)

Convert message body to correct type

## Declaration

```
public static DomainShutdownRDTO ConversionReceivedData(object data)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Object	data	Message body

Returns

TYPE	DESCRIPTION
<a href="#">DomainShutdownRDTO</a>	Message body as DomainShutdownRDTO



# Class DomainStartupTemplate

Describes common part of machine startup request sent from overseers to virtServers

Inheritance

System.Object  
DomainStartupTemplate

Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Communication.MessagesTemplates](#)

Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class DomainStartupTemplate
```

Fields

MessageType

Type of message body - used to properly cast after deserialization

Declaration

```
public static readonly Type MessageType
```

Field Value

TYPE	DESCRIPTION
System.Type	

MessageTypeNames

Message name - used to recognize package type

Declaration

```
public const string MessageTypeNames = "DomainStartup"
```

Field Value

TYPE	DESCRIPTION
System.String	

Methods

ConversionReceivedData(Object)

Convert message body to correct type

Declaration

```
public static DomainStartupRDTO ConversionReceivedData(object data)
```

#### Parameters

TYPE	NAME	DESCRIPTION
System.Object	data	Message body

#### Returns

TYPE	DESCRIPTION
<a href="#">DomainStartupRDTO</a>	Message body as DomainStartupRDTO

# Class ModelReportTemplate

Describes common part of model report message sent from overseers to virtServers

### Inheritance

System.Object  
ModelReportTemplate

### Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Communication.MessagesTemplates](#)

Assembly: OneClickDesktop.BackendClasses.dll

### Syntax

```
public class ModelReportTemplate
```

### Fields

#### MessageType

Type of message body - used to properly cast after deserialization

### Declaration

```
public static readonly Type MessageType
```

### Field Value

TYPE	DESCRIPTION
System.Type	

#### MessageTypeName

Message name - used to recognize package type

### Declaration

```
public const string MessageTypeName = "ModelReport"
```

### Field Value

TYPE	DESCRIPTION
System.String	

### Methods

#### ConversionReceivedData(Object)

Convert message body to correct type

### Declaration

public static

VirtualizationServer

ConversionReceivedData(object data)

Parameters

TYPE	NAME	DESCRIPTION
System.Object	data	Message body

Returns

TYPE	DESCRIPTION
VirtualizationServer	Message body as VirtualizationServer

# Class PingTemplate

Describes common part of machine shutdown request sent from overseers to virtServers

### Inheritance

System.Object  
PingTemplate

### Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Communication.MessagesTemplates](#)

Assembly: OneClickDesktop.BackendClasses.dll

### Syntax

```
public class PingTemplate
```

### Fields

#### MessageType

Type of message body - used to properly cast after deserialization

### Declaration

```
public static readonly Type MessageType
```

### Field Value

TYPE	DESCRIPTION
System.Type	

#### MessageTypeName

Message name - used to recognize package type

### Declaration

```
public const string MessageTypeName = "Ping"
```

### Field Value

TYPE	DESCRIPTION
System.String	

# Class SessionCancelTemplate

Describes common part of session cancellation request sent from overseers to virtServers

Inheritance

System.Object  
SessionCancelTemplate

Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Communication.MessagesTemplates](#)

Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class SessionCancelTemplate
```

Fields

MessageType

Type of message body - used to properly cast after deserialization

Declaration

```
public static readonly Type MessageType
```

Field Value

TYPE	DESCRIPTION
System.Type	

MessageTypeNames

Message name - used to recognize package type

Declaration

```
public const string MessageTypeNames = "SessionCancel"
```

Field Value

TYPE	DESCRIPTION
System.String	

Methods

ConversionReceivedData(Object)

Convert message body to correct type

Declaration

public static SessionCancelRDTO ConversionReceivedData(object data)

Parameters

TYPE	NAME	DESCRIPTION
System.Object	data	Message body

Returns

TYPE	DESCRIPTION
<a href="#">SessionCancelRDTO</a>	Message body as SessionCancelRDTO

# Class SessionCreationTemplate

Describes common part of session creation request sent from overseers to virtServers

Inheritance

System.Object  
SessionCreationTemplate

Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Communication.MessagesTemplates](#)

Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class SessionCreationTemplate
```

Fields

MessageType

Type of message body - used to properly cast after deserialization

Declaration

```
public static readonly Type MessageType
```

Field Value

TYPE	DESCRIPTION
System.Type	

MessageTypeName

Message name - used to recognize package type

Declaration

```
public const string MessageTypeName = "SessionCreation"
```

Field Value

TYPE	DESCRIPTION
System.String	

Methods

ConversionReceivedData(Object)

Convert message body to correct type

Declaration



public static

SessionCreationRDTO

ConversionReceivedData

(object data)

Parameters

TYPE	NAME	DESCRIPTION
System.Object	data	Message body

Returns

TYPE	DESCRIPTION
<a href="#">SessionCreationRDTO</a>	Message body as SessionCreationRDTO

# Namespace

## OneClickDesktop.BackendClasses.Communication.RabbitDTOs

### Classes

#### [DomainShutdownRDTO](#)

Data for domain shutdown request

#### [DomainStartupRDTO](#)

Data for domain startup request

#### [SessionCancelRDTO](#)

Data for session cancel request

#### [SessionCreationRDTO](#)

Data for session creation request

# Class DomainShutdownRDTO

Data for domain shutdown request

Inheritance

System.Object  
DomainShutdownRDTO

Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Communication.RabbitDTOs](#)  
Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class DomainShutdownRDTO
```

Properties

DomainName

Domain name to shutdown

Declaration

```
public string DomainName { get; set; }
```

Property Value

TYPE	DESCRIPTION
System.String	

# Class DomainStartupRDTO

Data for domain startup request

Inheritance

System.Object  
DomainStartupRDTO

Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Communication.RabbitDTOs](#)  
Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class DomainStartupRDTO
```

Properties

DomainName

Domain name to start

Declaration

```
public string DomainName { get; set; }
```

Property Value

TYPE	DESCRIPTION
System.String	

DomainType

Domain type to start

Declaration

```
public MachineType DomainType { get; set; }
```

Property Value

TYPE	DESCRIPTION
<a href="#">MachineType</a>	

# Class SessionCancelRDTO

Data for session cancel request

Inheritance

System.Object

SessionCancelRDTO

Inherited Members

- System.Object.Equals(System.Object)
- System.Object.Equals(System.Object, System.Object)
- System.Object.GetHashCode()
- System.Object.GetType()
- System.Object.MemberwiseClone()
- System.Object.ReferenceEquals(System.Object, System.Object)
- System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Communication.RabbitDTOs](#)

Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class SessionCancelRDTO
```

Properties

SessionGuid

Session guid to cancel

Declaration

```
public Guid SessionGuid { get; set; }
```

Property Value

TYPE	DESCRIPTION
System.Guid	

# Class SessionCreationRDTO

Data for session creation request

Inheritance

System.Object  
SessionCreationRDTO

Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Communication.RabbitDTOs](#)  
Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class SessionCreationRDTO
```

Properties

DomainName

Machine wished to attach to session

Declaration

```
public string DomainName { get; set; }
```

Property Value

TYPE	DESCRIPTION
System.String	

PartialSession

Partially created session

Declaration

```
public Session PartialSession { get; set; }
```

Property Value

TYPE	DESCRIPTION
<a href="#">Session</a>	

# Namespace OneClickDesktop.BackendClasses.Model

## Classes

### [Machine](#)

Single instance of virtual machine

### [Session](#)

Session connecting user to machine

### [SystemModel](#)

Describes abstract system model owned by every overseer

### [User](#)

Stores information about user

### [VirtualizationServer](#)

Represents virtualization server

## Structs

### [MachineAddress](#)

Describes address of machine

# Class Machine

Single instance of virtual machine

Inheritance

System.Object  
Machine

Implements

System.IEquatable<[Machine](#)>

Inherited Members

System.Object.Equals(System.Object, System.Object)  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Model](#)

Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class Machine : IEquatable<Machine>
```

Constructors

Machine(String, MachineState, MachineType, MachineResources, User, Nullable<MachineAddress>)

Json constructor

Declaration

```
[JsonConstructor]  
public Machine(string name, MachineState state, MachineType machineType, MachineResources usingResources, User  
connectedUser, MachineAddress? ipAddress)
```

Parameters

TYPE	NAME	DESCRIPTION
System.String	name	
<a href="#">MachineState</a>	state	
<a href="#">MachineType</a>	machineType	
<a href="#">MachineResources</a>	usingResources	
<a href="#">User</a>	connectedUser	
System.Nullable< <a href="#">MachineAddress</a> >	ipAddress	

Machine(String, MachineType, MachineResources, VirtualizationServer)

Create machine in OFF state with no user assigned and no ipAddress (can only be assigned after machine starts)

Declaration

```
public Machine(string name, MachineType type, MachineResources resources, VirtualizationServer parent)
```



## Parameters

TYPE	NAME	DESCRIPTION
System.String	name	Machine identifier
<a href="#">MachineType</a>	type	Machine Type
<a href="#">MachineResources</a>	resources	Resources assigned to machine
<a href="#">VirtualizationServer</a>	parent	Virtualization server running machine

## Properties

### ConnectedUser

User currently using machine

#### Declaration

```
public User ConnectedUser { get; }
```

#### Property Value

TYPE	DESCRIPTION
<a href="#">User</a>	

### IpAddress

IpAddress of machine (for connection)

#### Declaration

```
public MachineAddress? IpAddress { get; }
```

#### Property Value

TYPE	DESCRIPTION
System.Nullable< <a href="#">MachineAddress</a> >	

### MachineType

Type of machine

#### Declaration

```
public MachineType MachineType { get; }
```

#### Property Value

TYPE	DESCRIPTION
<a href="#">MachineType</a>	

## Name

Machine identifier

Declaration

```
public string Name { get; }
```

Property Value

TYPE	DESCRIPTION
System.String	

## ParentServer

Virtualization server hosting machine

Declaration

```
[JsonIgnore]  
public VirtualizationServer ParentServer { get; set; }
```

Property Value

TYPE	DESCRIPTION
<a href="#">VirtualizationServer</a>	

## State

Current state of machine

Declaration

```
public MachineState State { get; set; }
```

Property Value

TYPE	DESCRIPTION
<a href="#">MachineState</a>	

## UsingResources

Resources assigned to machine

Declaration

```
public MachineResources UsingResources { get; }
```

Property Value

TYPE	DESCRIPTION
<a href="#">MachineResources</a>	

## Methods

AssignAddress(MachineAddress)

Assign IP ipAddress to machine

#### Declaration

```
public void AssignAddress(MachineAddress ip)
```

#### Parameters

TYPE	NAME	DESCRIPTION
MachineAddress	ip	IP address of machine

### AssignUser(User)

Assign user to machine

#### Declaration

```
public void AssignUser(User user)
```

#### Parameters

TYPE	NAME	DESCRIPTION
User	user	User to assign

### Equals(Machine)

Checks if other Machine object is equal to this one. Checks if [Name](#) is equal

#### Declaration

```
public bool Equals(Machine other)
```

#### Parameters

TYPE	NAME	DESCRIPTION
Machine	other	Machine to check against

#### Returns

TYPE	DESCRIPTION
System.Boolean	True if Machines are equal, otherwise false

### Equals(Object)

Checks if other object is equal to this one. Checks if [Name](#) is equal

#### Declaration

```
public override bool Equals(object obj)
```

#### Parameters

TYPE	NAME	DESCRIPTION
System.Object	obj	Object to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if objects are equal, otherwise false

Overrides

System.Object.Equals(System.Object)

GetHashCode()

Returns the hash code of Machine

Declaration

```
public override int GetHashCode()
```

Returns

TYPE	DESCRIPTION
System.Int32	32-bit signed integer hash code

Overrides

System.Object.GetHashCode()

Implements

System.IEquatable<T>

# Struct MachineAddress

Describes address of machine

### Inherited Members

- System.ValueType.Equals(System.Object)
- System.ValueType.GetHashCode()
- System.ValueType.ToString()
- System.Object.Equals(System.Object, System.Object)
- System.Object.GetType()
- System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [OneClickDesktop.BackendClasses.Model](#)

Assembly: [OneClickDesktop.BackendClasses.dll](#)

### Syntax

```
public struct MachineAddress
```

### Constructors

#### MachineAddress(String, Int32)

Creates new machine address with hostname and port

### Declaration

```
public MachineAddress(string address, int port = 3389)
```

### Parameters

TYPE	NAME	DESCRIPTION
System.String	address	Hostname part of address
System.Int32	port	Port of address

### Properties

#### Address

Hostname part of machine address

### Declaration

```
public string Address { readonly get; set; }
```

### Property Value

TYPE	DESCRIPTION
System.String	

#### Port

Port of machine address

### Declaration

```
public int Port { readonly get; set; }
```

Property Value

TYPE	DESCRIPTION
System.Int32	

# Class Session

Session connecting user to machine

Inheritance

System.Object  
Session

Implements

System.IEquatable<Session>  
System.IComparable<Session>

Inherited Members

System.Object.Equals(System.Object, System.Object)  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: OneClickDesktop.BackendClasses.Model  
Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class Session : IEquatable<Session>, IComparable<Session>
```

## Constructors

Session(Machine, User, Guid, SessionType, SessionState)

Json constructor

Declaration

```
[JsonConstructor]  
public Session(Machine correlatedMachine, User correlatedUser, Guid sessionGuid, SessionType sessionType, SessionState sessionState)
```

Parameters

TYPE	NAME	DESCRIPTION
Machine	correlatedMachine	
User	correlatedUser	
System.Guid	sessionGuid	
SessionType	sessionType	
SessionState	sessionState	

Session(Session)

Create session from other session

Declaration

```
public Session(Session other)
```

#### Parameters

TYPE	NAME	DESCRIPTION
<a href="#">Session</a>	other	Other session

Session(User, SessionType, Machine)

Create session of set Type for user and machine

#### Declaration

<pre>public Session(User user, SessionType sessionType, Machine machine = null)</pre>
---

#### Parameters

TYPE	NAME	DESCRIPTION
<a href="#">User</a>	user	Session user
<a href="#">SessionType</a>	sessionType	Session Type
<a href="#">Machine</a>	machine	Assigned machine (defaults to null)

#### Properties

CorrelatedMachine

Machine assigned to session

#### Declaration

<pre>public Machine CorrelatedMachine { get; }</pre>
--

#### Property Value

TYPE	DESCRIPTION
<a href="#">Machine</a>	

CorrelatedUser

User assigned to session

#### Declaration

<pre>public User CorrelatedUser { get; }</pre>
--

#### Property Value

TYPE	DESCRIPTION
<a href="#">User</a>	

SessionGuid



Session identifier

Declaration

```
public Guid SessionGuid { get; }
```

Property Value

TYPE	DESCRIPTION
System.Guid	

SessionState

Session state

Declaration

```
public SessionState SessionState { get; set; }
```

Property Value

TYPE	DESCRIPTION
<a href="#">SessionState</a>	

SessionType

Session Type

Declaration

```
public SessionType SessionType { get; }
```

Property Value

TYPE	DESCRIPTION
<a href="#">SessionType</a>	

Methods

AttachMachine(Machine)

Assign machine to session

Declaration

```
public void AttachMachine(Machine machine)
```

Parameters

TYPE	NAME	DESCRIPTION
<a href="#">Machine</a>	machine	Machine for assign

CompareTo(Session)

Compares this object with other Session object. Comparison is made on [SessionGuid](#)

#### Declaration

```
public int CompareTo(Session other)
```

#### Parameters

TYPE	NAME	DESCRIPTION
<a href="#">Session</a>	other	Session object to compare

#### Returns

TYPE	DESCRIPTION
System.Int32	Int representing position of this object compared to other

### DetachMachine()

Marks session as dead (remove machine and mark to remove)

#### Declaration

```
public void DetachMachine()
```

### Equals(Session)

Checks if other Session object is equal to this one. Checks if [SessionGuid](#) is equal

#### Declaration

```
public bool Equals(Session other)
```

#### Parameters

TYPE	NAME	DESCRIPTION
<a href="#">Session</a>	other	Session to check against

#### Returns

TYPE	DESCRIPTION
System.Boolean	True if Sessions are equal, otherwise false

### Equals(Object)

Checks if other object is equal to this one. Checks if [SessionGuid](#) is equal

#### Declaration

```
public override bool Equals(object obj)
```

#### Parameters

TYPE	NAME	DESCRIPTION
System.Object	obj	Object to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if objects are equal, otherwise false

Overrides

System.Object.Equals(System.Object)

GetHashCode()

Returns the hash code of Session

Declaration

```
public override int GetHashCode()
```

Returns

TYPE	DESCRIPTION
System.Int32	32-bit signed integer hash code

Overrides

System.Object.GetHashCode()

Implements

System.IEquatable<T>

System.IComparable<T>

# Class SystemModel

Describes abstract system model owned by every overseer

Inheritance

System.Object  
SystemModel

Inherited Members

System.Object.Equals(System.Object)  
System.Object.Equals(System.Object, System.Object)  
System.Object.GetHashCode()  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Model](#)

Assembly: [OneClickDesktop.BackendClasses.dll](#)

Syntax

```
public class SystemModel
```

Properties

Servers

L Virtualization servers in system

Declaration

```
public IReadOnlyDictionary<Guid, VirtualizationServer> Servers { get; }
```

Property Value

TYPE	DESCRIPTION
System.Collections.Generic.IReadOnlyDictionary<System.Guid, <a href="#">VirtualizationServer</a> >	

Sessions

Sessions in system

Declaration

```
public IReadOnlyDictionary<Guid, Session> Sessions { get; }
```

Property Value

TYPE	DESCRIPTION
System.Collections.Generic.IReadOnlyDictionary<System.Guid, <a href="#">Session</a> >	

Methods

CreateSession(User, SessionType)

Create new session of Type for user

Declaration

```
public Session CreateSession(User user, SessionType sessionType)
```

#### Parameters

TYPE	NAME	DESCRIPTION
User	user	Session user
SessionType	sessionType	Session Type

#### Returns

TYPE	DESCRIPTION
Session	Created session

### DeleteServer(Guid)

Delete server

#### Declaration

```
public void DeleteServer(Guid serverGuid)
```

#### Parameters

TYPE	NAME	DESCRIPTION
System.Guid	serverGuid	Server identifier

### DeleteSession(IEnumerable<Guid>)

Delete multiple sessions

#### Declaration

```
public void DeleteSession(IEnumerable<Guid> sessionGuids)
```

#### Parameters

TYPE	NAME	DESCRIPTION
System.Collections.Generic.IEnumerable<System.Guid>	sessionGuids	Sessions identifiers

### DeleteSession(Guid)

Delete session

#### Declaration

```
public void DeleteSession(Guid sessionGuid)
```

#### Parameters

TYPE	NAME	DESCRIPTION
System.Guid	sessionGuid	Session identifier

## GetSessionInfo(Guid)

Get information about session by identifier

Declaration

```
public Session GetSessionInfo(Guid sessionGuid)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Guid	sessionGuid	Session identifier

Returns

TYPE	DESCRIPTION
<a href="#">Session</a>	Session information

## UpdateOrAddServer(VirtualizationServer)

Add new virtualization server or update if it already exists

Declaration

```
public void UpdateOrAddServer(VirtualizationServer server)
```

Parameters

TYPE	NAME	DESCRIPTION
<a href="#">VirtualizationServer</a>	server	Virtualization server to add

Exceptions

TYPE	CONDITION
System.ArgumentNullException	Server is null

## UpdateOrAddSession(Session)

Update session or add if didn't exist

Declaration

```
public void UpdateOrAddSession(Session session)
```

Parameters

TYPE	NAME	DESCRIPTION
Session	session	Session to update

Exceptions

TYPE	CONDITION
System.ArgumentNullException	Session is null

# Class User

Stores information about user

Inheritance

System.Object  
User

Implements

System.IComparable<User>  
System.IEquatable<User>

Inherited Members

System.Object.Equals(System.Object, System.Object)  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: OneClickDesktop.BackendClasses.Model  
Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class User : IComparable<User>, IEquatable<User>
```

## Constructors

### User()

Create new user object

Declaration

```
public User()
```

### User(Guid, String)

Create new user with identifier and token

Declaration

```
[JsonConstructor]  
public User(Guid guid, string jwtToken = null)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Guid	guid	User identifier
System.String	jwtToken	User JWT token

## Properties

### Guid

User identifier



## Declaration

```
public Guid Guid { get; }
```

## Property Value

TYPE	DESCRIPTION
System.Guid	

## JwtToken

JWT token for authorization

## Declaration

```
public string JwtToken { get; set; }
```

## Property Value

TYPE	DESCRIPTION
System.String	

## Methods

### CompareTo(User)

Compares this object with other User object. Comparison is made on [Guid](#)

## Declaration

```
public int CompareTo(User other)
```

## Parameters

TYPE	NAME	DESCRIPTION
<a href="#">User</a>	other	User object to compare

## Returns

TYPE	DESCRIPTION
System.Int32	Int representing position of this object compared to other

### Equals(User)

Checks if other User object is equal to this one. Checks if [Guid](#) is equal

## Declaration

```
public bool Equals(User other)
```

## Parameters

TYPE	NAME	DESCRIPTION
User	other	User to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if Users are equal, otherwise false

Equals(Object)

Checks if other object is equal to this one. Checks if [Guid](#) is equal

Declaration

```
public override bool Equals(object obj)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Object	obj	Object to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if objects are equal, otherwise false

Overrides

System.Object.Equals(System.Object)

GetHashCode()

Returns the hash code of User

Declaration

```
public override int GetHashCode()
```

Returns

TYPE	DESCRIPTION
System.Int32	32-bit signed integer hash code

Overrides

System.Object.GetHashCode()

Implements

System.IComparable<T>



# Class VirtualizationServer

Represents virtualization server

Inheritance

System.Object  
VirtualizationServer

Implements

System.IEquatable<VirtualizationServer>  
System.IComparable<VirtualizationServer>

Inherited Members

System.Object.Equals(System.Object, System.Object)  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)  
System.Object.ToString()

Namespace: OneClickDesktop.BackendClasses.Model  
Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class VirtualizationServer : IEquatable<VirtualizationServer>, IComparable<VirtualizationServer>
```

## Constructors

VirtualizationServer(ServerResources, IDictionary<String, TemplateResources>, String)

Create virtualization server with complete resources and templates

Declaration

```
public VirtualizationServer(ServerResources totalResources, IDictionary<string, TemplateResources> templates, string queue)
```

Parameters

TYPE	NAME	DESCRIPTION
ServerResources	totalResources	Whole resources owned by server
System.Collections.Generic.IDictionary<System.String, TemplateResources>	templates	Template resources for use when creating new machines
System.String	queue	Name of RabbitMQ queue

VirtualizationServer(IReadOnlyDictionary<Guid, Session>, IReadOnlyDictionary<String, Machine>, IReadOnlyDictionary<String, TemplateResources>, ServerResources, Guid, String)

Json constructor

Declaration

```
[JsonConstructor]
public VirtualizationServer(IReadOnlyDictionary<Guid, Session> sessions, IReadOnlyDictionary<string, Machine>
runningMachines, IReadOnlyDictionary<string, TemplateResources> templateResources, ServerResources
totalResources, Guid serverGuid, string queue)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Collections.Generic.IReadOnlyDictionary<System.Guid, <a href="#">Session</a> >	sessions	
System.Collections.Generic.IReadOnlyDictionary<System.String, <a href="#">Machine</a> >	runningMachines	
System.Collections.Generic.IReadOnlyDictionary<System.String, <a href="#">TemplateResources</a> >	templateResources	
<a href="#">ServerResources</a>	totalResources	
System.Guid	serverGuid	
System.String	queue	

Properties

AvailableResources

Available resources on server (free resources + free machines)

Declaration

```
[JsonIgnore]
public ServerResources AvailableResources { get; }
```

Property Value

TYPE	DESCRIPTION
<a href="#">ServerResources</a>	

FreeResources

Free resources on server (resources not used by any machine)

Declaration

```
[JsonIgnore]
public ServerResources FreeResources { get; }
```

Property Value

TYPE	DESCRIPTION
<a href="#">ServerResources</a>	

Managable

Can server be managed (set after 2nd update)

Declaration

```
[JsonIgnore]
public bool Managable { get; set; }
```

Property Value

TYPE	DESCRIPTION
System.Boolean	

## Queue

Name of RabbitMQ queue for direct communication

Declaration

```
public string Queue { get; }
```

Property Value

TYPE	DESCRIPTION
System.String	

## RunningMachines

Machines running on server

Declaration

```
public IReadOnlyDictionary<string, Machine> RunningMachines { get; }
```

Property Value

TYPE	DESCRIPTION
System.Collections.Generic.IReadOnlyDictionary<System.String, <a href="#">Machine</a> >	

## ServerGuid

Server identifier

Declaration

```
public Guid ServerGuid { get; }
```

Property Value

TYPE	DESCRIPTION
System.Guid	

## Sessions

Sessions running on server

Declaration

```
public IReadOnlyDictionary<Guid, Session> Sessions { get; }
```

Property Value

TYPE	DESCRIPTION
System.Collections.Generic.IReadOnlyDictionary<System.Guid, <a href="#">Session</a> >	

### TemplateResources

Template resources for machine Type

Declaration

```
public IReadOnlyDictionary<string, TemplateResources> TemplateResources { get; }
```

Property Value

TYPE	DESCRIPTION
System.Collections.Generic.IReadOnlyDictionary<System.String, <a href="#">TemplateResources</a> >	

### TotalResources

Complete resources owned by server

Declaration

```
public ServerResources TotalResources { get; }
```

Property Value

TYPE	DESCRIPTION
<a href="#">ServerResources</a>	

### Methods

#### CompareTo(VirtualizationServer)

Compares this object with other VirtualizationServer object. Comparison is made on System.Guid

Declaration

```
public int CompareTo(VirtualizationServer other)
```

Parameters

TYPE	NAME	DESCRIPTION
<a href="#">VirtualizationServer</a>	other	VirtualizationServer object to compare

Returns

TYPE	DESCRIPTION
System.Int32	Int representing position of this object compared to other

#### CreateFullSession(Session, String)

Create full session on server with selected machine

Declaration

```
public Session CreateFullSession(Session halfSession, string machineName)
```

Parameters

TYPE	NAME	DESCRIPTION
Session	halfSession	Partial session (without machine)
System.String	machineName	Machine identifier

Returns

TYPE	DESCRIPTION
Session	Session with attached machine

Exceptions

TYPE	CONDITION
System.ArgumentException	Session already on server or invalid guid: part of other session or doesn't exist

CreateMachine(String, MachineType, GpuId)

Create new machine of specified Type with GPU

Declaration

```
public Machine CreateMachine(string name, MachineType type, GpuId gpuId = null)
```

Parameters

TYPE	NAME	DESCRIPTION
System.String	name	Machine identifier
MachineType	type	Type of machine
GpuId	gpuId	Identifier of GPU to use. If null - uses GPU from template resources

Returns

TYPE	DESCRIPTION
Machine	Created machine

Exceptions



TYPE	CONDITION
System.ArgumentException	Invalid machine Type

### DeleteMachine(String)

Delete machine

Declaration

```
public void DeleteMachine(string name)
```

Parameters

TYPE	NAME	DESCRIPTION
System.String	name	Machine identifier

### DeleteSession(Guid)

Delete session

Declaration

```
public void DeleteSession(Guid sessionGuid)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Guid	sessionGuid	Session identifier

### Equals(VirtualizationServer)

Checks if other VirtualizationServer object is equal to this one. Checks if System.Guid is equal

Declaration

```
public bool Equals(VirtualizationServer other)
```

Parameters

TYPE	NAME	DESCRIPTION
VirtualizationServer	other	VirtualizationServer to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if VirtualizationServers are equal, otherwise false

### Equals(Object)

Checks if other object is equal to this one. Checks if System.Guid is equal

Declaration

```
public override bool Equals(object obj)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Object	obj	Object to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if objects are equal, otherwise false

Overrides

System.Object.Equals(System.Object)

GetHashCode()

Returns the hash code of VirtualizationServer

Declaration

```
public override int GetHashCode()
```

Returns

TYPE	DESCRIPTION
System.Int32	32-bit signed integer hash code

Overrides

System.Object.GetHashCode()

Implements

System.IEquatable<T>

System.IComparable<T>

# Namespace

## OneClickDesktop.BackendClasses.Model.Resources

### Classes

#### [GpuId](#)

Class describing GPU as collection of PCI identifiers

#### [MachineResources](#)

Class describing resources used by single virtual machine

#### [PciAddressId](#)

Class describing PCI identifier as combination of domain, bus, slot and function ids. Format is similar to lspci

#### [Resources](#)

Class describing basic resources used by machine

#### [ServerResources](#)

Class describing resources used by single virtualization server

#### [TemplateResources](#)

Class describing template resources used when creating machine

# Class Gpuld

Class describing GPU as collection of PCI identifiers

Inheritance

System.Object  
Gpuld

Implements

System.IEquatable<Gpuld>

Inherited Members

System.Object.Equals(System.Object, System.Object)  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [OneClickDesktop.BackendClasses.Model.Resources](#)

Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class GpuId : IEquatable<GpuId>
```

## Constructors

Gpuld(IEnumerable<PciAddressId>)

Create Gpuld object

Declaration

```
public GpuId(IEnumerable<PciAddressId> pciIdentifiers)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Collections.Generic.IEnumerable< <a href="#">PciAddressId</a> >	pciIdentifiers	List of PCI identifiers

Gpuld(List<PciAddressId>)

Json constructor

Declaration

```
[JsonConstructor]  
public GpuId(List<PciAddressId> pciIdentifiers)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Collections.Generic.List< <a href="#">PciAddressId</a> >	pciIdentifiers	

## Properties

PciIdentifiers

List of PCI identifiers

Declaration

```
public List<PciAddressId> PciIdentifiers { get; }
```

Property Value

TYPE	DESCRIPTION
System.Collections.Generic.List<PciAddressId>	

Methods

Equals(Gpuld)

Checks if other Gpuld object is equal to this one. Checks if PciIdentifiers contains same identifiers

Declaration

```
public bool Equals(GpuId other)
```

Parameters

TYPE	NAME	DESCRIPTION
Gpuld	other	Gpuld to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if Gpuld are equal, otherwise false

Equals(Object)

Checks if other object is equal to this one. Checks if PciIdentifiers contains same identifiers

Declaration

```
public override bool Equals(object obj)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Object	obj	Object to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if objects are equal, otherwise false

Overrides

System.Object.Equals(System.Object)

GetHashCode()

Returns the hash code of Gpuld

Declaration

```
public override int GetHashCode()
```

Returns

TYPE	DESCRIPTION
System.Int32	32-bit signed integer hash code

Overrides

System.Object.GetHashCode()

ToString()

Concatenate PCI ids into string with ',' as separator

Declaration

```
public override string ToString()
```

Returns

TYPE	DESCRIPTION
System.String	String representation of Gpu

Overrides

System.Object.ToString()

Implements

System.IEquatable<T>

# Class MachineResources

Class describing resources used by single virtual machine

Inheritance

System.Object

[Resources](#)

MachineResources

Implements

System.IEquatable<[Resources](#)>

Inherited Members

[Resources.Memory](#)

[Resources.CpuCores](#)

[Resources.Storage](#)

[Resources.Equals\(Resources\)](#)

[Resources.Equals\(Object\)](#)

[Resources.GetHashCode\(\)](#)

System.Object.Equals(System.Object, System.Object)

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Model.Resources](#)

Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class MachineResources : Resources, IEquatable<Resources>
```

Constructors

MachineResources(Resources, GpuId)

Create machine resources from template and GPU information

Declaration

```
public MachineResources(Resources template, GpuId gpu)
```

Parameters

TYPE	NAME	DESCRIPTION
<a href="#">Resources</a>	template	Template resources
<a href="#">GpuId</a>	gpu	GPU assigned

MachineResources(TemplateResources)

Create machine resources from template resource containing information about GPU

Declaration

```
public MachineResources(TemplateResources template)
```

Parameters

TYPE	NAME	DESCRIPTION
<a href="#">TemplateResources</a>	template	Template resource

MachineResources(Int32, Int32, Int32, GpuId)

Create machine resources from numerical description

Declaration

```
[JsonConstructor]
public MachineResources(int memory, int cpuCores, int storage, GpuId gpu)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Int32	memory	Amount of memory bytes assigned
System.Int32	cpuCores	Amount of CPU cores assigned
System.Int32	storage	Amount of storage bytes assigned
<a href="#">GpuId</a>	gpu	GPU assigned

Properties

Gpu

Assigned GPU processor

Declaration

```
public GpuId Gpu { get; set; }
```

Property Value

TYPE	DESCRIPTION
<a href="#">GpuId</a>	

Implements

System.IEquatable<T>



# Class PciAddressId

Class describing PCI identifier as combination of domain, bus, slot and function ids. Format is similar to lspci

Inheritance

System.Object  
PciAddressId

Implements

System.IEquatable<PciAddressId>

Inherited Members

System.Object.Equals(System.Object, System.Object)  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [OneClickDesktop.BackendClasses.Model.Resources](#)

Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class PciAddressId : IEquatable<PciAddressId>
```

## Constructors

PciAddressId(String, String, String, String)

Create PCI address id representation

Declaration

```
[JsonConstructor]  
public PciAddressId(string domain, string bus, string slot, string function)
```

Parameters

TYPE	NAME	DESCRIPTION
System.String	domain	Domain id
System.String	bus	Bus id
System.String	slot	Slot id
System.String	function	Function id

## Properties

Bus

PCI device bus

Declaration

```
public string Bus { get; set; }
```

Property Value

TYPE	DESCRIPTION
System.String	

## Domain

PCI device domain

Declaration

```
public string Domain { get; set; }
```

Property Value

TYPE	DESCRIPTION
System.String	

## Function

PCI device function

Declaration

```
public string Function { get; set; }
```

Property Value

TYPE	DESCRIPTION
System.String	

## Slot

PCI device slot

Declaration

```
public string Slot { get; set; }
```

Property Value

TYPE	DESCRIPTION
System.String	

## Methods

### Equals(PciAddressId)

Checks if other PCI address is equal to this one. Comparison is based on string representation of PCI address

Declaration

```
public bool Equals(PciAddressId other)
```

Parameters

TYPE	NAME	DESCRIPTION
<a href="#">PciAddressId</a>	other	PCI address to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if PCI addresses are equal, otherwise false

Equals(Object)

Checks if other object is equal to this one. Comparison is based on string representation of PCI address

Declaration

```
public override bool Equals(object obj)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Object	obj	Object to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if objects are equal, otherwise false

Overrides

System.Object.Equals(System.Object)

GetHashCode()

Returns the hash code of this PCI address

Declaration

```
public override int GetHashCode()
```

Returns

TYPE	DESCRIPTION
System.Int32	32-bit signed integer hash code

Overrides

System.Object.GetHashCode()

Parse(String)

Parse from string matching same format as in [TryParse\(String, out PciAddressId\)](#)

Declaration

```
public static PciAddressId Parse(string address)
```

Parameters

TYPE	NAME	DESCRIPTION
System.String	address	String representation of PCI address

Returns

TYPE	DESCRIPTION
PciAddressId	PCI address

Exceptions

TYPE	CONDITION
System.FormatException	String does not match format

ToString()

Converts PCI address to string representation in format '{domain}:{bus}:{slot}.{function}'

Declaration

```
public override string ToString()
```

Returns

TYPE	DESCRIPTION
System.String	PCI address string representation

Overrides

System.Object.ToString()

TryParse(String, out PciAddressId)

Try to parse PCI address from string representation in format '{domain:4}:{bus:2}:{slot:2}.{function:1}'. All groups are hexadecimal numbers without prefix

Declaration

```
public static bool TryParse(string address, out PciAddressId pciAddressId)
```

Parameters

TYPE	NAME	DESCRIPTION
System.String	address	String representation of PCI address

TYPE	NAME	DESCRIPTION
PciAddressId	pciAddressId	Parsed PCI address if successful, otherwise null

Returns

TYPE	DESCRIPTION
System.Boolean	Bool indicating whether parse succeed

Implements

System.IEquatable<T>

# Class Resources

Class describing basic resources used by machine

Inheritance

System.Object

Resources

[MachineResources](#)

[ServerResources](#)

[TemplateResources](#)

Implements

System.IEquatable<[Resources](#)>

Inherited Members

System.Object.Equals(System.Object, System.Object)

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Model.Resources](#)

Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class Resources : IEquatable<Resources>
```

## Constructors

Resources(Int32, Int32, Int32)

Create resources from numerical description

Declaration

```
[JsonConstructor]  
public Resources(int memory, int cpuCores, int storage)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Int32	memory	Amount of memory MiB assigned
System.Int32	cpuCores	Amount of CPU cpuCores assigned
System.Int32	storage	Amount of storage bytes assigned

## Properties

CpuCores

Number of CPU threads

Declaration

```
public int CpuCores { get; set; }
```

#### Property Value

TYPE	DESCRIPTION
System.Int32	

## Memory

Memory in MiB (1024 base)

#### Declaration

```
public int Memory { get; set; }
```

#### Property Value

TYPE	DESCRIPTION
System.Int32	

## Storage

Storage in GiB (1024 base)

#### Declaration

```
public int Storage { get; set; }
```

#### Property Value

TYPE	DESCRIPTION
System.Int32	

## Methods

### Equals(Resources)

Checks if other Resources object is equal to this one. Checks if all fields are equal

#### Declaration

```
public bool Equals(Resources other)
```

#### Parameters

TYPE	NAME	DESCRIPTION
<a href="#">Resources</a>	other	Resources to check against

#### Returns

TYPE	DESCRIPTION
System.Boolean	True if Resources are equal, otherwise false

Equals(Object)

Checks if other object is equal to this one. Checks if all fields are equal

Declaration

```
public override bool Equals(object obj)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Object	obj	Object to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if objects are equal, otherwise false

Overrides

System.Object.Equals(System.Object)

GetHashCode()

Returns the hash code of Resources

Declaration

```
public override int GetHashCode()
```

Returns

TYPE	DESCRIPTION
System.Int32	32-bit signed integer hash code

Overrides

System.Object.GetHashCode()

Operators

Addition(Resources, Resources)

Calculates sum of resources

Declaration

```
public static Resources operator +(Resources r1, Resources r2)
```

Parameters

TYPE	NAME	DESCRIPTION
Resources	r1	Base resources



TYPE	NAME	DESCRIPTION
Resources	r2	Added resources

Returns

TYPE	DESCRIPTION
Resources	Sum of resources

Subtraction(Resources, Resources)

Calculates difference of resources

Declaration

```
public static Resources operator -(Resources r1, Resources r2)
```

Parameters

TYPE	NAME	DESCRIPTION
Resources	r1	Base resources
Resources	r2	Subtracted resources

Returns

TYPE	DESCRIPTION
Resources	Difference of resources

Remarks

Does not check if result has negative fields

Implements

System.IEquatable<T>

# Class ServerResources

Class describing resources used by single virtualization server

Inheritance

System.Object

Resources

ServerResources

Implements

System.IEquatable<Resources>

System.IEquatable<ServerResources>

Inherited Members

Resources.Memory

Resources.CpuCores

Resources.Storage

Resources.Equals(Resources)

System.Object.Equals(System.Object, System.Object)

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Model.Resources](#)

Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class ServerResources : Resources, IEquatable<Resources>, IEquatable<ServerResources>
```

## Constructors

ServerResources(Resources, IEnumerable<GpuId>)

Create server resources from base resources and GPUs identifiers

Declaration

```
public ServerResources(Resources baseResources, IEnumerable<GpuId> gpus)
```

Parameters

TYPE	NAME	DESCRIPTION
<a href="#">Resources</a>	baseResources	Base resources
System.Collections.Generic.IEnumerable< <a href="#">GpuId</a> >	gpus	List of GPU descriptions

ServerResources(Int32, Int32, Int32, IEnumerable<GpuId>)

Create server resources from numerical description

Declaration

```
public ServerResources(int memory, int cpuCores, int storage, IEnumerable<GpuId> gpuIds)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Int32	memory	Amount of memory MiB assigned
System.Int32	cpuCores	Amount of CPU cpuCores assigned
System.Int32	storage	Amount of storage bytes assigned
System.Collections.Generic.IEnumerable<Gpuld>	gpulds	List of GPU identifiers

ServerResources(Int32, Int32, Int32, List<Gpuld>)

Json constructor

Declaration

```
[JsonConstructor]
public ServerResources(int memory, int cpuCores, int storage, List<GpuId> gpuIds)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Int32	memory	
System.Int32	cpuCores	
System.Int32	storage	
System.Collections.Generic.List<Gpuld>	gpulds	

Properties

GpuCount

Number of GPU processors

Declaration

```
[JsonIgnore]
public int GpuCount { get; }
```

Property Value

TYPE	DESCRIPTION
System.Int32	

Gpulds

Collection of identifiers of GPU - every GPU contains multiple PCI IDs

Declaration

```
public List<GpuId> GpuIds { get; }
```

#### Property Value

TYPE	DESCRIPTION
System.Collections.Generic.List< <a href="#">GpuId</a> >	

#### Methods

##### Equals(ServerResources)

Checks if other ServerResources object is equal to this one. Checks if all fields are equal and [GpuIds](#) contains same gpus

#### Declaration

```
public bool Equals(ServerResources other)
```

#### Parameters

TYPE	NAME	DESCRIPTION
<a href="#">ServerResources</a>	other	ServerResources to check against

#### Returns

TYPE	DESCRIPTION
System.Boolean	True if ServerResources are equal, otherwise false

##### Equals(Object)

Checks if other object is equal to this one. Checks if all fields are equal and [GpuIds](#) contains same gpus

#### Declaration

```
public override bool Equals(object obj)
```

#### Parameters

TYPE	NAME	DESCRIPTION
System.Object	obj	Object to check against

#### Returns

TYPE	DESCRIPTION
System.Boolean	True if objects are equal, otherwise false

#### Overrides

[Resources.Equals\(Object\)](#)

##### GetHashCode()

Returns the hash code of ServerResources

Declaration

```
public override int GetHashCode()
```

Returns

TYPE	DESCRIPTION
System.Int32	32-bit signed integer hash code

Overrides

[Resources.GetHashCode\(\)](#)

Operators

Addition(ServerResources, ServerResources)

Calculates sum of server resources

Declaration

```
public static ServerResources operator +(ServerResources r1, ServerResources r2)
```

Parameters

TYPE	NAME	DESCRIPTION
<a href="#">ServerResources</a>	r1	Base server resources
<a href="#">ServerResources</a>	r2	Added server resources

Returns

TYPE	DESCRIPTION
<a href="#">ServerResources</a>	Sum of resources

Remarks

Only use for statistics, since gpulds don't make sense when outside of server

Implements

System.IEquatable<T>  
System.IEquatable<T>

# Class TemplateResources

Class describing template resources used when creating machine

Inheritance

System.Object

[Resources](#)

TemplateResources

Implements

System.IEquatable<[Resources](#)>

System.IEquatable<[TemplateResources](#)>

Inherited Members

[Resources.Memory](#)

[Resources.CpuCores](#)

[Resources.Storage](#)

[Resources.Equals\(Resources\)](#)

System.Object.Equals(System.Object, System.Object)

System.Object.GetType()

System.Object.MemberwiseClone()

System.Object.ReferenceEquals(System.Object, System.Object)

System.Object.ToString()

Namespace: [OneClickDesktop.BackendClasses.Model.Resources](#)

Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class TemplateResources : Resources, IEquatable<Resources>, IEquatable<TemplateResources>
```

Constructors

TemplateResources(MachineType, Int32, Int32, Int32, Boolean, String)

Create template resources from numerical description

Declaration

```
[JsonConstructor]
public TemplateResources(MachineType templateType, int memory, int cpuCores, int storage, bool attachGpu,
string wishedGpuModel = null)
```

Parameters

TYPE	NAME	DESCRIPTION
<a href="#">MachineType</a>	templateType	
System.Int32	memory	Amount of memory bytes assigned
System.Int32	cpuCores	Amount of CPU cpuCores assigned
System.Int32	storage	Amount of storage bytes assigned

TYPE	NAME	DESCRIPTION
System.Boolean	attachGpu	Attach gpu to machine
System.String	wishedGpuModel	Description of wished GPU model

Properties

AttachGpu

Whether or not machine should have GPU attached

Declaration

```
public bool AttachGpu { get; set; }
```

Property Value

TYPE	DESCRIPTION
System.Boolean	

TemplateType

Machine type paired with this template

Declaration

```
public MachineType TemplateType { get; set; }
```

Property Value

TYPE	DESCRIPTION
MachineType	

WishedGpuModel

GPU description of GPU to attach (does not guarantee this GPU will be used)

Declaration

```
public string WishedGpuModel { get; set; }
```

Property Value

TYPE	DESCRIPTION
System.String	

Methods

Equals(TemplateResources)

Checks if other TemplateResources object is equal to this one. Checks if all fields are equal

Declaration

```
public bool Equals(TemplateResources other)
```

#### Parameters

TYPE	NAME	DESCRIPTION
<a href="#">TemplateResources</a>	other	TemplateResources to check against

#### Returns

TYPE	DESCRIPTION
System.Boolean	True if TemplateResources are equal, otherwise false

### Equals(Object)

Checks if other object is equal to this one. Checks if all fields are equal

#### Declaration

```
public override bool Equals(object obj)
```

#### Parameters

TYPE	NAME	DESCRIPTION
System.Object	obj	Object to check against

#### Returns

TYPE	DESCRIPTION
System.Boolean	True if objects are equal, otherwise false

#### Overrides

[Resources.Equals\(Object\)](#)

### GetHashCode()

Returns the hash code of TemplateResources

#### Declaration

```
public override int GetHashCode()
```

#### Returns

TYPE	DESCRIPTION
System.Int32	32-bit signed integer hash code

#### Overrides

[Resources.GetHashCode\(\)](#)



## Implements

System.IEquatable<T>

System.IEquatable<T>

# Namespace OneClickDesktop.BackendClasses.Model.States

## Enums

### [MachineState](#)

State of machine

### [SessionState](#)

State of session

# Enum MachineState

State of machine

Namespace: [OneClickDesktop.BackendClasses.Model.States](#)

Assembly: [OneClickDesktop.BackendClasses.dll](#)

Syntax

```
public enum MachineState
```

## Fields

NAME	DESCRIPTION
Booting	Machine is booting - treated as busy
Free	Machine has booted and doesn't have session assigned - treated as available
Occupied	Machine has session assigned and client connected - treated as busy
Reserved	Machine has session assigned and is waiting for user to connect - treated as busy
TurnedOff	Machine is turned off - treated as nonexistent
WaitingForShutdown	Machine has session assigned and client disconnected, waiting for reconnect or shutdown - treated as busy

# Enum SessionState

State of session

Namespace: [OneClickDesktop.BackendClasses.Model.States](#)

Assembly: [OneClickDesktop.BackendClasses.dll](#)

Syntax

```
public enum SessionState
```

Fields

NAME	DESCRIPTION
Cancelled	Session cancelled by user or system (cannot be matched with machine)
Pending	Session created and waiting for machine
Running	Session has machine assigned
WaitingForRemoval	Session ended

# Namespace OneClickDesktop.BackendClasses.Model.Types

## Classes

### [MachineType](#)

Class describing type of domain

### [SessionType](#)

Class describing type of session

# Class MachineType

Class describing type of domain

Inheritance

System.Object  
MachineType

Implements

System.IEquatable<MachineType>  
System.IEquatable<SessionType>  
System.IEquatable<System.String>

Inherited Members

System.Object.Equals(System.Object, System.Object)  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: OneClickDesktop.BackendClasses.Model.Types  
Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class MachineType : IEquatable<MachineType>, IEquatable<SessionType>, IEquatable<string>
```

## Properties

### HumanReadableName

Human readable name displaying at frontend

Declaration

```
public string HumanReadableName { get; set; }
```

Property Value

TYPE	DESCRIPTION
System.String	

### TechnicalName

Technical named used inside model

Declaration

```
public string TechnicalName { get; set; }
```

Property Value

TYPE	DESCRIPTION
System.String	

## Methods

### Equals(MachineType)

Checks if other MachineType object is equal to this one. Checks if all fields are equal

Declaration

```
public bool Equals(MachineType other)
```

Parameters

TYPE	NAME	DESCRIPTION
MachineType	other	MachineType to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if MachineTypes are equal, otherwise false

Equals(SessionType)

Checks if other SessionType object is equal to this one. Objects are equal if [TechnicalName](#) is equal to [Type](#)

Declaration

```
public bool Equals(SessionType other)
```

Parameters

TYPE	NAME	DESCRIPTION
SessionType	other	SessionType to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if objects are equal, otherwise false

Equals(Object)

Checks if other object is equal to this one. Checks if all fields are equal

Declaration

```
public override bool Equals(object obj)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Object	obj	Object to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if objects are equal, otherwise false

Overrides

System.Object.Equals(System.Object)

Equals(String)

Checks if string object is equal to this one. Objects are equal if string is equal to [TechnicalName](#)

Declaration

```
public bool Equals(string other)
```

Parameters

TYPE	NAME	DESCRIPTION
System.String	other	string to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if objects are equal, otherwise false

GetHashCode()

Returns the hash code of MachineType

Declaration

```
public override int GetHashCode()
```

Returns

TYPE	DESCRIPTION
System.Int32	32-bit signed integer hash code

Overrides

System.Object.GetHashCode()

ToString()

String representation of MachineType

Declaration

```
public override string ToString()
```

Returns



TYPE	DESCRIPTION
System.String	Technical name

Overrides

System.Object.ToString()

Implements

System.IEquatable<T>

System.IEquatable<T>

System.IEquatable<T>

# Class SessionType

Class describing type of session

Inheritance

System.Object  
SessionType

Implements

System.IEquatable<[SessionType](#)>  
System.IEquatable<[MachineType](#)>

Inherited Members

System.Object.Equals(System.Object, System.Object)  
System.Object.GetType()  
System.Object.MemberwiseClone()  
System.Object.ReferenceEquals(System.Object, System.Object)

Namespace: [OneClickDesktop.BackendClasses.Model.Types](#)

Assembly: OneClickDesktop.BackendClasses.dll

Syntax

```
public class SessionType : IEquatable<SessionType>, IEquatable<MachineType>
```

Properties

Type

Session type code

Declaration

```
public string Type { get; set; }
```

Property Value

TYPE	DESCRIPTION
System.String	

Methods

Equals(MachineType)

Checks if other MachineType object is equal to this one. Objects are equal if [Type](#) is equal to [TechnicalName](#)

Declaration

```
public bool Equals(MachineType other)
```

Parameters

TYPE	NAME	DESCRIPTION
<a href="#">MachineType</a>	other	MachineType to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if objects are equal, otherwise false

Equals(SessionType)

Checks if other SessionType object is equal to this one. Checks if all fields are equal

Declaration

```
public bool Equals(SessionType other)
```

Parameters

TYPE	NAME	DESCRIPTION
SessionType	other	SessionType to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if SessionTypes are equal, otherwise false

Equals(Object)

Checks if other object is equal to this one. Checks if all fields are equal

Declaration

```
public override bool Equals(object obj)
```

Parameters

TYPE	NAME	DESCRIPTION
System.Object	obj	Object to check against

Returns

TYPE	DESCRIPTION
System.Boolean	True if objects are equal, otherwise false

Overrides

System.Object.Equals(System.Object)

GetHashCode()

Returns the hash code of SessionType

Declaration

```
public override int GetHashCode()
```

Returns

TYPE	DESCRIPTION
System.Int32	32-bit signed integer hash code

Overrides

System.Object.GetHashCode()

ToString()

String representation of SessionType

Declaration

```
public override string ToString()
```

Returns

TYPE	DESCRIPTION
System.String	Session type

Overrides

System.Object.ToString()

Implements

System.IEquatable<T>

System.IEquatable<T>